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DEVELOPMENT OF OBSTETRICS AND GYNÆCOLOGY.

By SIR WILLIAM FLETCHER SHAW, M.D., F.R.C.P., F.R.C.O.G., F.A.C.S. (Hon.), M.M.S.A. (Hon.), *London.*

UNTIL recent years obstetrics and gynæcology have been the "Cinderella" of our profession. The second *Medical Act* made this subject compulsory along with medicine and surgery; in the universities there were chairs; but in the allocation of beds, the hours of students' training, the importance of the examination, it did not, until recent times, compare with the other two major subjects of medicine and surgery In fact, in England, it was only when we founded our own College, and so banded together the teachers of this subject, that any great advancement was possible.

To seek for the answer we have to study the history of medicine, and especially the history in our own country.

It might be expected that the human race would be especially interested in the method of its reproduction, and it was in the earlier days. It was only force of circumstances which obliterated that interest, which was not fully revived in Great Britain until after the first World War.

The ancients were as interested in this subject as in medicine and surgery, and in the second century Soranus of Ephesus collected into one volume all that was known of obstetrics and gynæcology, and in this described podalic version and the obstetric chair.

Unfortunately the progress of knowledge in every branch of learning came to an end in the next few centuries, as the centres of culture were over-run by hosts of barbarians. From that period until the Renaissance, 1200 years later, might was right, the man of war was in control, and learning was relegated to the monasteries. Very fortunately for the human race those monasteries were in existence, as through them much of the ancient knowledge was preserved. Those old monks not only preserved the knowledge of medicine, but they were interested in it and practised it, although they did not make any great advances in our knowledge. Owing to the fact that blood was abhorrent to them they practised only pure medicine, but to them are directly due some of our oldest medical foundations, such as Saint Bartholomew's and Saint Thomas's Hospitals. They could not show any interest in surgery, and even such simple procedures as blood letting were referred to their lay brothers the barbers, and it was even more impossible for them to show any interest in obstetrics.

During these twelve centuries surgery was practised by two types of individuals: the barbers, who gradually acquired some knowledge of the treatment of wounds amongst the laity, and the body of surgeons who accompanied the great barons to war and thus acquired considerable experience in the treatment of wounds and fractures.

Obstetrics, during this period, sank to its lowest level. It was left almost entirely in the hands of women, most of them untrained, and those who had received any instruction had done so at the hands of other badly trained women. There was no increase of knowledge, and many barbarous customs were handed down from generation to generation.

We know little of mediæval obstetrics, but we may gauge the extent of its degradation by what happened in the sixteenth century. In normal labour, it is stated, a woman had an even chance, if she did not succumb to puerperal fever or eclampsia. In difficult labour she was usually butchered to death if attended by a "Sairey Gamp" of the time or one of the vagabond "surgeons". As a rule, only midwives attended women in labour, but in

1580 a law was passed in Germany to prevent shepherds and herdsmen from attending obstetric cases. The Renaissance pictures, like the mediæval data, show that the lying-in room was crowded with people bustling in every direction, giving the general impression of "all sorts of female fussiness".

In the fifteenth century occurred the Renaissance, that wonderful revival of learning when men's minds suddenly felt the urge for knowledge in every department of life. Commencing in Italy, it surged through France and the Low Countries to England. The ablest minds were interested in every side of learning—literature, the arts, sciences, travel and astronomy, and in this great revival were included medicine and surgery. Now was opened a great field of research in medicine and surgery, and some of the best minds in these countries were devoted to it. Coincident with this was the discovery of printing, which more than anything diffused this increasing knowledge.

But obstetrics, bound by the customs of many centuries, was enslaved in women's hands. Few, if any, women took part in this wonderful revival of learning, and as men were excluded from the birth chamber, no advance was made. In 1513 appeared Roslin's "*Rosegarten*" and some years later its English translation, "The Byrthe of Mankind", by William Raynalde. These were the first printed books on obstetrics, but it is interesting to note that there is not a single advance in these volumes from those of Soranus twelve centuries earlier.

In the sixteenth century knowledge of medicine, surgery, anatomy and physiology rapidly increased, but in obstetrics practically no advance was made. Ambroise Paré (1510-1590) who, like many others, was keenly interested in obstetrics, but who could not satisfy his curiosity or develop any considerable practice, was occasionally smuggled into a birth chamber in cases of difficulty. He made podalic version practicable, and he had the courage to induce artificial labour in cases of uterine hæmorrhage. But this is only one bright ray in the darkness of mediævalism.

It was a century later before obstetrics escaped from its thraldom, owing to the action of some of the ladies of the French Court, who apparently took up the attitude that in their trouble, often occasioned by the king himself, it should be possible for them to have the same skilled attention as was given to His Majesty. In 1663 Louise de la Vallière was attended by Le Sieur Boucher, and in 1667 Julien Clement attended Madame de Montespan, and in 1682 the Queen herself when the Dauphin was born.

This had a tremendous effect. The movement, commenced by the female leaders in the French Court, spread to other ranks and into the Low Countries. The birth chamber was now open to trained minds, and this was immediately followed by a great advance in knowledge. François Mauriceau and Paul Portal in Paris, and Van Deventer and Roonhuyze in Holland made great advances, and began for the first time to put obstetrics on a scientific basis. In Great Britain men were still excluded from the birth chamber for another century until William Smellie fought and routed the midwives and laid the foundation for a school of British obstetrics.

It is interesting to consider why Great Britain lagged so far behind France, especially when one remembers that the forceps were invented by Peter Chamberlain, and that he attended Queen Anne, wife of James I, and Henrietta Maria, wife of Charles I, while the future Queen Anne was attended by Hugh Chamberlain in 1692, and it is probably a reflection of the effect which court fashion had upon the two countries. In France it was only necessary for the Court to adopt a certain attitude for it to be followed by the whole country, whereas in England, court fashion seemed to have had little effect.

William Smellie (1697-1763), however, by his force of character and ability did, in the eighteenth century, fight and rout the midwives; from that time men were able to attend women in confinements, and from then has dated our British school of obstetrics. Smellie himself invented the steel lock forceps, and later the double-curved forceps, while in "Smellie's Midwifery" he laid down the safe rules for the application of forceps, and he differentiated between contracted and normal pelves by measurement. Some years later John Harvey, who had married Smellie's niece, wrote a pamphlet on the external manual expression of the placenta, ninety years before Credé.

William Hunter (1718-1783) was a pupil of Smellie. He taught anatomy and his school was one of the most famous, but his best known work is the "Atlas of the Pregnant Uterus". It was he who discovered the *decidua reflexa*, and that the maternal and fœtal circulations were separate.

Charles White (1728-1813) was one of the most famous pupils of William Hunter, and a great friend of his brother, John Hunter, and he is the father of aseptic midwifery. Before his time women were confined in heated rooms with the windows hermetically sealed, were put to bed with the curtains drawn and the bedclothes heaped upon them. No fresh air was allowed to come near them, nor could the bedclothes be removed for fear of a chill supervening, with the result that they lay in the lochia and discharges, and it is little wonder that so many of them became septic. When shivering occurred more bedclothes were heaped upon them, and they were given alcoholic drinks to make them sweat profusely, but still they were not cleansed. Charles White broke the windows, took down the bedcurtains, insisted upon the patient's being cleansed, and invented a bedstead on which the patient's body was put in a reclining posture to allow of free drainage from the vagina. This is now called Fowler's position, though White described it and published in his book a picture of it in those early days.

It was White's proud boast, after sixty years of practice, that he had never lost a single patient by puerperal fever whose confinement he had attended alone. He insisted upon great cleanliness on the part of the medical attendant, and if he had been in contact with a septic patient, insisted that clothes must be changed and that the doctor scrupulously cleansed himself. His book went through many editions, and was published also in America, France and Germany.

I may perhaps be allowed a special pride in Charles White, as he founded the two hospitals with which I have been associated during the whole of my professional life, the Manchester Royal Infirmary in 1767, and Saint Mary's Hospital for Women in 1790.

Obstetrics was now free, and on this solid foundation has grown the school of British obstetrics. It is interesting to note that the greatest advances against the scourge, puerperal fever, came from Great Britain—Charles White, who proved clinically that it could be avoided by cleanliness; Lister, who gave us antisepsis; and more recently Colebrook, who proved the action of the sulphonamides, and Fleming, who gave us penicillin.

But although obstetrics was now free to be practised by any medical practitioner, all was not well in the obstetric world, as the physician and the surgeon tended to look with scorn on the man who practised this art. It was only in the latter half of the nineteenth century that the Royal College of Physicians showed its approval of the obstetrician by raising him to the Fellowship of the College, thereby greatly enhancing his social position. When I was young most of the leaders in the obstetric world were Fellows of this ancient college.

Just before and during my early days, gynæcology was taking part in the great expansion which had come to every department of surgery, and the abdomen was being opened more and more frequently and for ever increasing reasons. There was, therefore, a tendency at this time to turn to the Royal College of Surgeons, and in my generation the London men became Fellows of both colleges.

In Great Britain, as on the Continent, gynæcology was practised by the obstetrician, and modern gynæcological surgery was developed by him. In practically every large city of Great Britain, cities in which eventually universities were established, there was a special hospital devoted to obstetrics and gynæcology, which, being free from the cramping influence of the physicians and surgeons, was able to expand to meet the growing needs of this branch of medicine. Gynæcology at first consisted only of medical or local treatment, but gradually in the latter half of the nineteenth century, when the discovery of anæsthetics and

antiseptics made possible the development of surgical treatment, the obstetrician took his full part. The first abdominal condition for which surgical treatment was established was ovarian cyst. The first successful operation for this condition was done by McDowell in the United States of America, but he performed the operation only thirteen times. Later this operation was attempted by the general surgeons, Lizars of Edinburgh in particular, with such disastrous results that it was only attempted sporadically until Charles Clay, an obstetrician on the staff of Saint Mary's Hospital, Manchester, showed that it could be carried out with comparative safety. In 1842 he performed three ovariotomies with two successful results. By 1880 he had performed the operation four hundred times and it was then that Spencer Wells, who later became famous as an ovariotomist, came to watch him operate, and later began his own successful career. The term "ovariotomy" was coined for Clay's operation by Sir James Y. Simpson of Edinburgh, who frequently travelled to Manchester to watch Clay operate. It is interesting to note that Clay's first fourteen patients were operated upon without an anæsthetic. In 1843 Clay performed the first hysterectomy for fibroids, and, twenty years later, the first successful one. Here again the faithful Sir James Y. Simpson travelled to Manchester and took the specimen back with him to Edinburgh, from whence he wrote:

> . . . Your case may turn out as a precedent in some exceptional cases of large fibroids of the Uterus, and I congratulate you most sincerely on the happy recovery of your patient. . . .

In the provinces, in Scotland and in Ireland, it was the custom to give young trainees sound and extensive clinical training in the special hospitals, training in both obstetrics and gynæcology and, as each university centre had a large hospital devoted to gynæcology and obstetrics, this could be done. Having spent some years in clinical training, these men did not usually trouble to take a higher qualification, as at that time there were not any whose preparation would advance their knowledge of this subject. In London the position was different. Here there were a few special obstetrical and gynæcological hospitals, but not nearly so many as there were medical schools. Therefore, as the general physician and surgeon rarely allows a full teaching unit in obstetrics and gynæcology to be developed in a teaching general hospital, the majority of the young trainees in obstetrics and gynæcology could not obtain the same long clinical training as those in centres outside London. Consequently the London men devoted to the obtaining of higher qualifications the extra time which the provincial man devoted to clinical training. Both missed something. The London man, the intensive clinical training; the provincial man, the mental discipline of preparing for a higher qualification.

Towards the end of the last century the London man who up to now had become a Fellow of the Royal College of Physicians began also to take the Fellowship of the Royal College of Surgeons, and the majority of London men in my generation took both. In later years, however, more and more emphasis was put upon surgery. All young London gynæcologists became Fellows of the Royal College of Surgeons, and ceased to take the examination for the Membership of the Royal College of Physicians, and finally came the cry that no one should do any form of surgery who was not a Fellow of the Royal College of Surgeons, and that gynæcology and surgical obstetrics were part of general surgery. Was there anything more ridiculous, or if it had been successful, anything which would have done more harm to our women? So loud was the cry by the surgeons and the gynæcological surgeons untrained in obstetrics, that London and a few provincial hospitals passed regulations requiring candidates for the post of gynæcologist to be F.R.C.S. To many of us this seemed to be a waste of time, as this training contains nothing helpful to the candidate who wishes to practise obstetrics and gynæcology. Much more important, four universities divided the teaching so that the professor taught obstetrics only while a lecturer was appointed to teach gynæcology. Worst of all, a number of men were elected professors of obstetrics because they were Fellows of the Royal College of Surgeons, who had not held any resident post in obstetrics. The height of absurdity was reached when men with the university degree of Doctor of Medicine, and even some who were Fellows of the Royal College of Physicians, discarded the dignified title of "Doctor" and voluntarily assumed the undistinguished appellation of "Mister". It was at this time that the teachers of obstetrics and gynæcology felt that something must be done. A little further delay and obstetrics and gynæcology would be irretrievably separated, with the result that gynæcology and surgical obstetrics would be taught and practised as a pure surgical subject, and the women of our country subjected to much unnecessary operative, and often mutilating operative, interference. We therefore founded, in the face of much opposition from the Royal College of Physicians and the Royal College of Surgeons, our own College, which is now also a Royal College. In the space of less than twenty years we have gained our point. Obstetrics and gynæcology are taught and practised as one indivisible whole by men trained in obstetrics and gynæcology. Moreover, the Royal College of Obstetricians and Gynæcologists is recognized as representing one leg of the tripod, as do the Royal College of Physicians and the Royal College of Surgeons the other two, and when matters relating to consultants are under discussion, they are referred to the three Royal Colleges.

From the first this college received much support in the Dominions, and at the present time in Great Britain and the Dominions there are only three universities where the teaching is divided. In founding our College, we laid down the principle for the first time in Great Britain that membership must be a guarantee of training as well as of examination. We believe that a consultant should have an all round training, and so every candidate now has to hold appointments for six months each as house physician and house surgeon in a general hospital, followed by two years in obstetrics and gynæcology, and all these appointments must be in hospitals recognized by the College. Only after this can he proceed to the examination which is designed so that the preparation for it is valuable even if the candidate fails in the examination itself. At first we met with much opposition from the other Royal Colleges, but now we are friendly and work together through a Standing Joint Committee of the three Royal Colleges, which considers matters of interest to all three and to consultants in general.

In Great Britain, and in most parts of our Dominions, there is no question but that we have done the right thing and have saved obstetrics and gynæcology. Even in the United States of America, where obstetrics and gynæcology developed separately, there has been a great change of opinion, and I think that I am right in stating that there is now only one well known school where they are taught separately. It is disappointing, therefore, to find in Australia a few who still desire to separate gynæcology from obstetrics and to attach it to general surgery, a position abandoned in Great Britain many years ago. Let me discuss this under two headings:

1. In the first place history shows that the physician and surgeon have never understood the importance of obstetrics and gynæcology, and have always done their best to keep them in a subordinate position. As I said at the outset, obstetrics and gynæcology have always been the "Cinderella" of the profession. The physicians and surgeons have shown their contempt for them, and whatever quarrels they might have amongst themselves, they have always united to crush the aspiration of the obstetrician and gynæcologist for teaching facilities *et cetera*, even when they were admitting them as individuals to the Fellowship of their respective colleges.

The first *Medical Act*, passed in 1858, established the General Medical Council and the first Medical Register. Before that time members of our profession were trained and examined in and practised only one branch of medicine, physicians, surgeons, and apothecaries, and the large corporations governing each group took care that none of the others infringed their rights. It is reported that Peter Chamberlain, the inventor of the midwifery forceps, who was admitted a member of the Barber Surgeons Company, was thrown into prison at the instance of the Royal College of Physicians because he was guilty of

administering drugs. Even Queen Anne, wife of James I, whom he attended, together with the Archbishop of Canterbury, could not effect his release until he gave a promise not to sin again. By the 1858 Act these holders of various diplomas were gathered together in one register, and each was free to practise any branch of medicine. It was only natural, therefore, that candidates for our profession now began to be trained in all branches, and that the various examining bodies formed alliances to grant candidates a combined qualification; at first the Royal College of Surgeons with the Society of Apothecaries granted the M.R.C.S. and L.S.A., and later the Royal College of Physicians joined with the Royal College of Surgeons in the Conjoint Board to grant the M.R.C.S. and L.R.C.P.

As good midwifery was so important to the nation, and as it had now been in the hands of our profession for about a century, it might have been expected that training in this branch would have been stimulated; but no, physicians and surgeons always combined to frustrate any suggestion for better teaching and examination. From 1858 to 1926, the only years for which I have the figures, the physicians and surgeons combined to elect 182 physicians and surgeons to the General Medical Council, and during the whole of this period there were elected only four obstetricians. On each occasion when an obstetrician sat upon the Council a definite advance in obstetric teaching was made.

In 1869 the General Medical Council for the first time made midwifery a compulsory subject in the curriculum, but every attempt to implement this by including compulsory attendance upon labours was defeated until 1888, when, for the first time, it was laid down that candidates had to attend twelve labours—this delay, be it remembered, in spite of the fact that the second *Medical Act* of 1886 laid down that every candidate must be trained and examined in medicine, surgery and midwifery. Even this did not remove the suppressing hand of the physician and surgeon, as in 1895 an inquiry made by the General Medical Council showed that the regulations were not observed. Nor are later regulations observed by the London teaching schools and examining bodies as the physicians and surgeons have never allowed the London teaching hospitals to develop sufficiently large obstetric units to provide the necessary cases.

The largest examination in Great Britain is that of the Conjoint Board founded by the cooperation of the Royal College of Physicians and the Royal College of Surgeons, to grant a conjoint diploma of M.R.C.S. and L.R.C.P. From the first this examination has been held in three parts, medicine, surgery and midwifery, and each can be taken separately. During the whole period of its existence, however, this examination has been controlled by a board of physicians and surgeons with never an obstetrician upon it.

The present regulations of the General Medical Council require a candidate to have resided for two months in a maternity hospital, and to have attended twenty cases of labour. In the provinces and in Scotland these regulations are complied with by every examining body, because in every university centre there is an associated hospital for obstetrics and gynæcology, which has developed free from the influence of the physicians and surgeons.

In London, the dozen or more large teaching hospitals have been allowed to develop only small and quite inadequate departments of obstetrics and gynæcology. In only three of these large schools is there an obstetric department of fifty beds, and even these are inadequate for their large number of students. The result is that the three largest examinations which cater for London students and are free from obstetric guidance, the Universities of London and of Cambridge, and the Conjoint Examination, do not insist upon these regulations being complied with. Even so recently as during this war the physicians and surgeons controlling the Conjoint Examination showed their supreme contempt for our subject by eliminating the clinical examination in obstetrics and gynæcology on the plea that they could not get the necessary cases, although no such excuses were made to eliminate the clinical examination in medicine and surgery. Cambridge, also free from obstetrical control, followed suit, and it required somewhat drastic measures to compel these bodies to reinstate these clinical examinations.

I am mentioning these points as many may say that full facilities are now granted for the teaching and examining of students in obstetrics and gynæcology. In a great majority of universities they are, and in the remainder they will be, but this has been brought about only because the obstetric and gynæcological teachers have combined in the Royal College of Obstetricians and Gynæcologists, and this College has now reached a position when its influence can be brought to bear. Without it, and, through it, the combined efforts of all teachers of obstetrics and gynæcology, the position would today be much worse than it is.

It is even generally recognized by the London schools that they have to set their house in order to provide adequate teaching facilities in obstetrics and gynæcology.

History shows that the development of obstetrics and gynæcology will be safer in the hands of gynæcologists and obstetricians themselves, and we must never relax the hold we have now won.

2. The other objection is that this action would divorce obstetrics from gynæcology, subjects which are inseparably interwoven. This is really the crux of the whole matter. If the surgeons and a few surgically minded gynæcologists had had their way in Great Britain, the surgeons would have taken what they called gynæcology and operative obstetrics, and would have left the remainder of obstetrics to anyone foolish enough to accept it. The general surgeons and, I am afraid, a few surgically minded gynæcologists look upon gynæcology as a purely surgical subject. They overlook the fact that the majority of patients with gynæcological conditions do not require operative interference, and will respond best to medical, hormonal or local treatment. In centres where so-called gynæcology is concentrated into the hands of general surgeons there is a tendency to stereotyped treatment, and for patients with certain conditions to be subjected to certain operations. Hence the excessive popularity of operations for fixing forward the unfortunate uterus which has normally developed in a retroflexed position.

In obstetrics the position is, if anything, worse, as surgical obstetrics begins and ends in Cæsarean section. In one centre I recently visited a general surgeon gave as his reason for doing a Cæsarean section the fact that the general practitioner had sent the patient into hospital for this purpose.

In teaching it is impossible to separate obstetrics from gynæcology. Gynæcology includes the study of the female reproductive organs in all phases, anatomy, physiology and pathology, and at all ages. Obstetrics is a mere incident, though the most important one in a woman's life history, and is included in the physiological study. A course of instruction usually begins with anatomy; then comes physiology, including normal pregnancy, labour and puerperium; then abnormal physiology, which includes much abnormal obstetrics and also disordered menstrual function *et cetera*; then pathology to include a little obstetrics and much gynæcology. How can such a subject be divided, and if it is, how can a student understand it?

In practice obstetrics must obsess the mind of the gynæcologist in every decision he makes upon treatment of a woman before the menopause.

Whether she must have an operation, and if so what operation, must be decided in relationship to future pregnancy and labour. And only a trained obstetrician is capable of making this decision. The general surgeon used to argue that because he commonly opened the abdomen, therefore he was best fitted to operate upon the pelvic organs. I willingly concede that a trained abdominal surgeon can remove these organs though not so neatly nor, in difficult cases, so thoroughly as can the trained gynæcologist. My complaint is that, being untrained in obstetrics, he so often removes them unnecessarily.

If only the general surgeon who practises gynæcology had this restraining knowledge of obstetrics, there would be fewer operations upon these organs, and these would be of a less mutilating character.

Now let me take the other side of the picture. The surgeons used to argue that only a man with the F.R.C.S.

should be allowed to operate, and that a gynæcologist without this decoration would fall down upon conditions other than gynæcological ones, which are sometimes unexpectedly encountered. What sheer nonsense.

The F.R.C.S., England, is a guarantee of only six months' resident post-graduate training in general surgery. The M.R.C.O.G. is a guarantee of the same amount of clinical training in general surgery with the addition of one year of gynæcology, as well as a year of obstetrics and six months of general medicine, and in the paper for the M.R.C.O.G. there is frequently a question upon surgical complications likely to be met with in abdominal surgery. No, the F.R.C.S. is no guarantee that the holder is competent to deal with abdominal emergencies.

The Australasian Fellowship with its long apprenticeship should guarantee that the holder has had abdominal experience, but it is no guarantee that he knows how to deal with a gynæcological emergency.

It is sometimes argued that because a gynæcologist is honest and calls in the general surgeon to help him out of a difficulty, the gynæcologist should not open the abdomen.

I think I can claim to have done as much abdominal surgery as most gynæcologists, as for long I had forty beds under my care, and I acknowledge to have met with my fair share of mistaken diagnoses.

There is one condition and one condition only for which I make a rule to close the abdomen, carcinoma of the sigmoid or rectum. On the few occasions when I have unexpectedly met this condition I have closed the abdomen and handed the operating over, not to any general surgeon, but to a surgeon specially experienced in the removal of these growths.

If only the general surgeon would be equally honest and close the abdomen when he meets gynæcological complications, many women would today possess organs unnecessarily removed, and many would be happy mothers of families.

One thing forty years of experience of abdominal surgery has taught me. A chronically inflamed appendix in a young woman should be in the province of the gynæcologist. How often have we to perform a second abdominal operation to deal with adherent tubes when the appendix has been removed through the futile grid incision and when the tubes have not been inspected?

One last point. The general surgeon overlooks the fact that it was the gynæcologist who first showed him that the abdomen could be opened with comparative safety. But for the work of Charles Clay and his successors, he might still be gazing wistfully and longingly at this closed field.

This attempt to divorce obstetrics from gynæcology and the undue emphasis given to the F.R.C.S., had several serious results in Great Britain thirty years ago. So loudly was this advocated that four universities did divide the teaching and appointed one man to teach obstetrics and another gynæcology. This led to unnecessary confusion in the student's mind, especially as none agreed where the division took place. After one period of office in each university the foolishness of this division was recognized, and I am glad to say that in no university in the British Isles and in only three in the Dominions is the subject now separated. Even in these three centres I have not met any gynæcologist who does not believe that a gynæcologist must also be a trained obstetrician, and who is not opposed to gynæcology being attached to general surgery.

So much was the F.R.C.S. stressed that a number of men who had this diploma were actually elected to professorships of obstetrics, although they had had no clinical training in obstetrics. Could anything be more absurd?

That danger in Great Britain is passed. Obstetrics and gynæcology is recognized as one indivisible subject: it is taught as such and practised as such to the clearer understanding of the students and to the greater safety and comfort of womankind. In the Dominions this is generally recognized. Even in the United States of America, where the subjects developed separately, and where until recently they were taught separately, there is now, I believe, only one well known school where they are taught and practised separately.

The reading of history and the inability of our friends the general physicians and surgeons, even in recent times, to understand the extent and importance of our branch of medicine, show how necessary was the foundation of our College, and how essential it is that obstetrics and gynæcology must be governed by obstetricians and gynæcologists.

SOME CLINICAL ASPECTS OF CARBON MONOXIDE POISONING.

By A. B. CORKILL,

From The Baker Medical Research Institute, Alfred Hospital, Prahran, Victoria,

WITH A NOTE ON "RESUSCITATION FROM ASPHYXIA" BY GEOFFREY KAYE, M.D., D.A., MELBOURNE.

CARBON MONOXIDE POISONING offers a perfect example of the correlation between physiological disturbances and clinical symptoms. Furthermore, the correct lines of treatment depend on an understanding of the underlying physiological changes.

During the last few years, and particularly in the "gas producer" era, there has been the opportunity of observing patients admitted to hospital with the diagnosis of carbon monoxide (CO) poisoning. On the whole, as judged by some of the forms of treatment adopted, there still appears to be a lack of appreciation of the fundamental physiological principles involved. There is also, from the biochemical aspect, a failure to realize the limitations of the usual laboratory diagnostic facilities. In my opinion the most authoritative data on carbon monoxide poisoning are to be found in the monograph by Cecil B. Drinker,[1] Professor of Physiology at Harvard University, and in the present article I have freely drawn from this source.

Carbon monoxide *per se* is non-toxic, but owing to its marked affinity for hæmoglobin it precludes oxygen from entering into combination with this pigment. The resultant anoxia, whilst affecting all tissues, is particularly important because of its effect on the central nervous system. As a result of cerebral anoxia, the intellect, behaviour and consciousness of the individual are affected. Maniacal shouting, extreme restlessness and struggling may occur. The effect of gradually increasing anoxia on the intellect is excellently described by J. S. Haldane[2] from personal experiments.

In anoxia the basal ganglia are also affected and there may be hypertonia, increased or absent deep reflexes, clonus and bilateral Babinski responses. Frequently combinations of the above may produce a bizarre neurological complex. The other outstanding characteristic of carbon monoxide poisoning is cerebral œdema with consequent rise in the cerebro-spinal fluid pressure. This has been clearly demonstrated both in man and in animals subjected to carbon monoxide poisoning.

This effect of carbon monoxide is not generally appreciated and it would appear that the troublesome headache, which is associated with mild poisoning or persists after recovery from severe poisoning, is directly attributable to cerebral œdema.

Drinker calls attention to the observations of Forbes *et alii*[3] on a case of poisoning in a young man in whom the rise in cerebro-spinal fluid pressure was verified. The intravenous injection of 100 millilitres of 15% saline solution into this patient rapidly relieved the headache and restored mental clarity. The judicious administration of hypertonic saline solution is a most important therapeutic measure and will be referred to again.

The Diagnosis of Carbon Monoxide Poisoning.

According to Henderson and Haggard[4] the relation between percentage saturation of the blood with carbon monoxide and clinical symptoms is as shown in Table I.

In most instances the diagnosis is obvious from the history of events: the patient may have been found in a room with gas escaping freely, or have collapsed in a

garage with a car engine running. On medico-legal grounds or where the diagnosis is not certain it may be necessary to establish definitely that carbon monoxide poisoning has occurred.

With a patient in deep coma it may be possible to establish the diagnosis of carbon monoxide poisoning by demonstrating the pink colour of diluted blood. A 1 in 300 dilution of the patient's blood is compared with a similar dilution of normal blood. However, in lesser grades of carbon monoxide poisoning this rough test would be quite useless.

The laboratory is frequently asked to examine blood, taken at times not at all relevant to the patient's condition, for the detection of carboxyhæmoglobin. A consideration of the following facts will demonstrate the limitations of the laboratory's abilities in this direction.

TABLE I.

Hæmoglobin Combined with Carbon Monoxide: Percentage of Total Hæmoglobin.	Effect.
10	No appreciable effect, except shortness of breath on exertion.
20	No appreciable effect in most cases, except short wind even on moderate exertion; slight headache in some cases.
30	Decided headache; irritation; ready fatigue; disturbance of judgement.
40–50	Headache, confusion, collapse and fainting on exertion.
60–70	Unconsciousness; respiratory failure and death if exposure is long continued.
80	Rapidly fatal.
Over 80	Immediately fatal.

The spectral absorption bands of oxyhæmoglobin (HbO_2) and carboxyhæmoglobin (HbCO) are situated between the D and E Fraunhofer lines. In undiluted blood the α and β bands are fused and it is necessary to dilute the blood, say 1 in 150, with ammonia water before separate bands can be seen. In blood that is completely saturated with carbon monoxide the α band is moved about one-third of its own width towards the violet end (60 Ångström units) in relation to the corresponding α band of blood completely saturated with oxygen. The degree of shift of the α band depends on the relative concentrations of carboxyhæmoglobin and oxyhæmoglobin, so, whilst it might be possible with the ordinary laboratory direct vision spectroscope to detect 100% saturation of hæmoglobin with carbon monoxide, by observing this slight shift in the α band, it would be quite futile with such an instrument to attempt to assess the presence of lesser amounts of carboxyhæmoglobin in the presence of oxyhæmoglobin.

The Hartridge Reversion Spectroscope.

The Hartridge reversion spectroscope can be used for both the detection and the estimation of carboxyhæmoglobin. It is so constructed that two spectra, in reversed positions, of the pigment under investigation are produced.

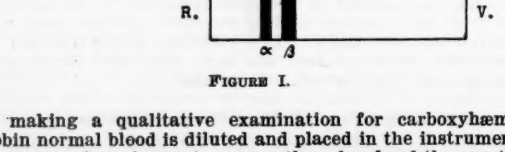

FIGURE I.

In making a qualitative examination for carboxyhæmoglobin normal blood is diluted and placed in the instrument. By means of a micrometer screw the α bands of the spectra are "set" to coincide (see Figure I).

The patient's blood is then similarly diluted and substituted for the normal blood and if carboxyhæmoglobin is present a slight shift to the violet end of the spectrum occurs and the α bands now overlap (see Figure II). The instrument used in this way will detect a carbon monoxide saturation of 50% or more.

By a modification of technique it is possible to estimate quantitatively the percentage saturation of hæmoglobin with carbon monoxide down to about 10%. There are various methods involving blood gas analysis which can

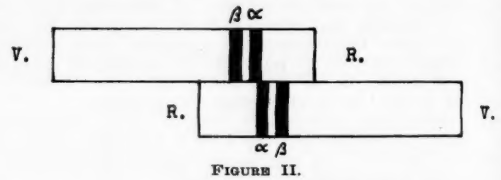

FIGURE II.

detect much smaller amounts of carboxyhæmoglobin, but in general these demand considerable technical skill and require chemical reagents that have to be freshly prepared immediately before use.

If the result of an analysis is to be decisive there are certain points to be observed. It is essential to obtain a sample of blood immediately the patient has been admitted to hospital and before carbogen therapy has been initiated. A consideration of the following curves showing the rates of elimination of carbon monoxide illustrates the necessity for early blood samples for diagnostic purposes.

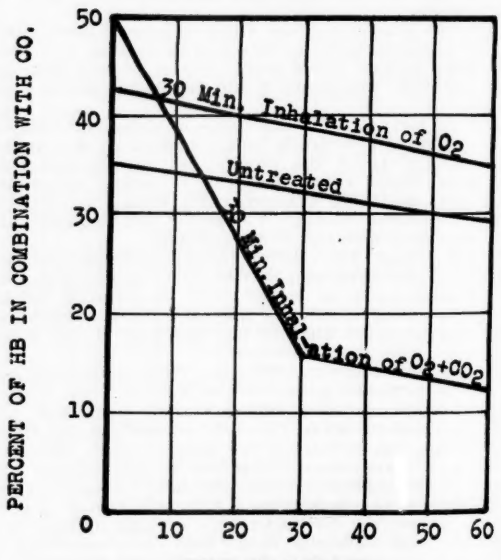

FIGURE III.

A comparison of the rates of elimination of carbon monoxide from the blood of a man gassed in 0·2% carbon monoxide for thirty minutes, when untreated, when treated by thirty minutes' inhalation of oxygen, and when treated by thirty minutes' inhalation of oxygen and carbon dioxide. (Redrawn by Drinker from Henderson and Haggard.)

Between the time that an individual is removed to an atmosphere free of carbon monoxide and admitted to hospital, there is, provided breathing is maintained, a steady elimination of carbon monoxide. Usually on admission to the ward "Carbogen" therapy is commenced as quickly as possible and then some time later a blood sample is taken for detection of carboxyhæmoglobin. From a consideration of the rate of elimination of carbon monoxide (see Figure III) under the influence of an oxygen and carbon dioxide mixture it is obvious that, if any useful information is to be obtained, it would be wiser to take a

sample of blood whilst preparations are being made to administer "Carbogen". Approximately five to six millilitres of blood should be collected in a tube containing oxalate. The tube should then be corked, kept in the dark and at leisure sent to the laboratory.

Treatment.

General.

In carbon monoxide poisoning the body temperature falls and hence appropriate steps should be taken to avoid this. In no circumstances should a patient recovering from carbon monoxide poisoning be allowed to walk about. An individual poisoned with carbon monoxide and lying prone may recover consciousness and then with assistance be permitted to walk out of doors. After a few steps he may collapse and again become unconscious. This phenomenon is due to the fact that carboxyhæmoglobin alters the dissociation curve of oxyhæmoglobin, so that the latter cannot supply oxygen to the tissues at the normal rate. Whilst the individual is at rest the oxygen supply might be sufficient but any extra demand cannot be met.

Special.

"Carbogen" (95% oxygen with 5% carbon dioxide). In a separate note by Dr. G. Kaye the details of this therapy are discussed.

Hypertonic Saline Solution. If following adequate "Carbogen" therapy there still persist signs of increased intracranial pressure which can be verified by lumbar puncture, 60-80 millilitres of 15% saline solution should be given intravenously.

Transfusion and Venesection. Concerning transfusion the following comment by Drinker should suffice: "No treatment is more out of place or more dangerous. By the time an individual with carbon monoxide poisoning is hospitalized and arrangements made for transfusion the carbon monoxide in his blood will invariably be low, and the only thing accomplished will be an unnecessary addition to the blood volume and a consequent increase on the burden of a heart already dilated and weakened by asphyxia." Occasionally one encounters a case in which both venesection and transfusion have been performed, the idea presumably being to replace blood containing carboxyhæmoglobin with normal blood. A brief consideration of the rapid elimination of carbon monoxide under the influence of "Carbogen" should suffice to discount the value of the former treatment.

Drugs. The use of numerous drugs has been suggested, strychnine, caffeine, atropine, morphine, pituitary extract, methylene blue and so on *ad nauseam*. According to Drinker it is doubtful whether any of these have a beneficial effect; in fact they may be dangerous. The only drug that may be of value is caffeine if injected intravenously.

Case Histories.

The following two cases illustrate some of the points concerning diagnosis and treatment that I have emphasized.

CASE I.—P.L., a male, aged twenty years, was admitted to hospital on February 2, 1947, at 7.30 p.m., with the diagnosis of carbon monoxide poisoning. He had been found unconscious in a room filled with coal gas. On admission the patient was comatose. The pulse and respiration rates were 112 and 32 per minute respectively. The blood pressure was 150 millimetres of mercury (systolic) and 60 millimetres (diastolic). The neurological findings of interest were absence of knee and ankle jerks. There was a bilateral Babinski response. At 8 p.m. intranasal "Carbogen" therapy was commenced. At 10 p.m. the patient was still unconscious and the infusion of one pint of blood was commenced by the drip method. Twenty-two ounces of blood were removed by venesection. At 11 p.m. the patient's condition was still the same and the infusion of another pint of blood was commenced.

On February 3, 1947, the patient was still comatose. On this day the laboratory received a specimen of blood to be examined for the presence of carboxyhæmoglobin. The report was as follows:

"No HbCO detected. This is consistent with the fact that approximately five hours had elapsed since the patient's removal from exposure to CO and the collection of blood and for four hours of this period he was treated with oxygen. See Drinker's 'Carbon Monoxide Asphyxia', p. 184, for rate of elimination of CO during oxygen and carbogen therapy."

Lumbar puncture was suggested and a clear fluid under a pressure of 180 millimetres of water was obtained. At the time (11 p.m.) the patient was semi-conscious, but very restless and irritable. Forty millilitres of 15% saline solution were given intravenously, and within a few hours there was a marked clinical improvement. On the next morning the patient was conscious and mentally alert.

CASE II.—N.R., a male, aged forty-nine years, was admitted to hospital at noon on September 3, 1943, semi-conscious and irrational. He had been found lying on the garage floor with the blower of a gas producer running. At the outside he had been there for twenty minutes. The patient was flushed and there were some scratches on his face and some blood about the nose and mouth. One-half hour after admission to hospital he became very restless and struggling of a maniacal type developed. He was completely uncontrollable until given one-half of a grain of morphine and one-fiftieth of a grain of hyoscine. "Carbogen" was then administered intranasally.

At 3 p.m. there developed spasticity of the left leg and a left Babinski response. One hour later there were spasticity of both legs and bilateral Babinski responses. A specimen of blood was taken and diluted and compared with normal blood. No difference in tint was observed.[1] Lumbar puncture was performed and a clear fluid under pressure of 300 millimetres of water was obtained. It was suggested that an extracerebral hæmorrhage might be present, and accordingly two burr holes were made in the skull. Nothing abnormal was found. Twenty-four hours later the patient was practically normal.

The comments on these two cases are obvious and one must pay respect to the resilience of the second patient's respiratory centre.

Acknowledgement.

I wish to thank Mr. A. Doutch for his technical assistance in the use of the Hartridge reversion spectroscope.

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RESUSCITATION FROM ASPHYXIA.

(G.K.)

The writer of this note is an anæsthetist. He has had but little acquaintance with carbon monoxide poisoning. Like other anæsthetists, however, he has had experience in the treatment of various forms of asphyxiation and is of the opinion that the basic principles of treatment of one form apply to all.

Treatment of Respiratory Arrest.

A patient in whom respiration has ceased, or has become so shallow as obviously to fail in oxygenating the hæmoglobin of the blood, is in a state of emergency. Effective treatment must be initiated within three minutes at the most, lest the heart fail or irreversible anoxic changes take place in the brain. The first step is, therefore, artificial respiration, which should be commenced without a moment's delay as soon as the patency of the air passages has been established. The actual method of artificial respiration is less important than is the imperative necessity of establishing a respiratory exchange which will oxygenate the blood and remove carbon dioxide from the lungs.

From the standpoint of respiratory exchange, Silvester's method is said to be somewhat more efficient than is Schafer's, and Eve's than both.(1) All three, however, are capable of saving life if promptly and efficiently carried out. Each should be combined with naso-pharyngeal insufflation of oxygen at a rate of eight litres per minute, provided that the necessary apparatus is at hand. If it is

[1] This blood was taken approximately four hours after removal from the carbon monoxide atmosphere.

not, time should not be wasted in seeking it; artificial respiration should be commenced at once with air and an assistant be dispatched in search of oxygen.

If the apparatus for it is available, an admirable form of artificial respiration is that suggested by Waters.[3] An anæsthesia mask, with valve closed, is applied to the face and its bag filled with oxygen. Manual pressure upon the bag causes the lungs to be inflated; relaxation of the pressure allows them to deflate. This cycle is repeated some ten times per minute, the amount of compression of the bag imitating the normal tidal excursion for a patient of that physique—for example, 400 millilitres in an adult. Since carbon dioxide is liberated into the bag at each "exhalation", the oxygen contained in it should be changed at intervals of about two minutes so that harmful accumulation of carbon dioxide may not occur. The need for this change can be obviated by the insertion of a canister containing soda lime between mask and bag.

This simple method is probably just as efficient as the Oxford resuscitator or any other appliance for mechanical inflation of the lungs. It is also more likely to be available in an emergency. Pulmotors and similar appliances, which both inflate and deflate the lungs mechanically, are no more effective and have grave physiological drawbacks which have been described by Drinker.[3]

The value of central respiratory stimulants, such as nicotinic diethylamide or pentamethylene tetrazol, is problematical. They will not effect resuscitation in the absence of effective artificial respiration. In its presence they are usually unnecessary. Time should not be wasted in giving them before an adequate respiratory exchange has been established artificially.

The Value of Carbon Dioxide.

In the classical treatment of carbon monoxide poisoning the oxygen used for resuscitation is admixed with from 3% to 7% of carbon dioxide. This method was introduced by Haggard and Henderson.[4] It rests upon the fact that carboxyhæmoglobin dissociates more rapidly in the presence of carbon dioxide than in that of oxygen alone. It arose, too, from Henderson's belief that, once respiration has ceased, oxygen alone is insufficient to restore it. This belief is no longer generally accepted by physiologists. Indeed, Barach[4] states that "although there is a somewhat faster elimination of carbon monoxide when carbon dioxide is added to the oxygen mixture, recovery takes place almost as fast if the patient is promptly provided with pure oxygen".

Carbon monoxide poisoning, like other forms of anoxia, raises the threshold of sensitivity of the respiratory centre to carbon dioxide. A raised tension of this gas in the blood is the result. Further administration is, therefore, not without hazard of central respiratory fatigue or disturbance of the acid-base equilibrium of the blood. The present writer, therefore, regards carbon dioxide as a two-edged weapon in resuscitation. It seems to him that concentrations of carbon dioxide exceeding 5% should never be used. The normal alveolar concentration of this gas is of the order of 5·6% and it is reasonable to suppose that the giving of higher concentrations would abolish the pressure gradient which effects the elimination of carbon dioxide from the body, thus doing grave harm to the patient.

The writer is not convinced that carbon dioxide mixtures are really superior to oxygen where modern methods of artificial respiration are used. There is also potential danger in the use of such mixtures. If they are employed, the following restrictions are suggested: firstly, that the percentage of carbon dioxide does not exceed three, or five at most; secondly, that the mixture be given by a method which precludes rebreathing; and thirdly, that it be withdrawn and replaced by oxygen as soon as the tidal volume of the respiration has regained the normal for a patient of that physique.

After-Care.

Resuscitation does not end with the restoration of spontaneous breathing. It is necessary to be sure that the respiratory volume remains capable of oxygenating the blood and removing carbon dioxide from it. Further, the respiratory, circulatory and metabolic functions will remain labile for some hours after resuscitation from asphyxia. Oxygen therapy will be required during this period.

It is not easy to find a method of oxygen therapy which is both efficient and acceptable to the patient. Masks and other devices, excellent for resuscitation, are not tolerated after consciousness has returned. Oxygen therapy chambers and air-conditioned tents are not usually available when required. Of the means at hand in clinical practice, the naso-pharyngeal catheter of Waters[5] and the B.L.B. mask[6] are the most generally applicable. Their detailed description is unnecessary here.

Whatever method of oxygen therapy is adopted, it is necessary to see that the minute-volume supplied is sufficient to prevent any relapse into anoxia, as shown by the patient's respiratory rate, pulse rate, blood pressure and colour of skin. This minute-volume should be maintained until maximal improvement has been reached in the patient's condition. It should then be reduced by successive increments, the effect of each being observed. Relapse into anoxia at any stage is an indication for return to a more generous supply of oxygen. In this way the patient is gradually "weaned away" from high concentrations of oxygen. Only when the concentration approximates to that of the atmosphere should therapy be discontinued. Sudden transference from a high concentration of oxygen to a comparatively low one is apt to be followed by respiratory or circulatory depression and by pulmonary atelectasis.

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PENICILLIN IN ABDOMINAL SURGERY, WITH SPECIAL REFERENCE TO ITS INTRAPERITONEAL USE.

By V. M. COPPLESON, M.B., Ch.M., F.R.C.S. (England),
Sydney.

AT that stage in the clinical development of penicillin when opinions of its scope were largely based on theory, it was widely held that penicillin was of no value in abdominal surgery. R. C. Handfield-Jones[1] expressed this opinion in the following words:

> Inasmuch as the dominant infections of the abdominal viscera are usually due to organisms derived from the intestinal tract, it is apparent that this great field of human pathology affords comparatively little scope for the use of penicillin.

Similar reasoning led Florey and Cairns[2] in 1943 to omit any consideration of the use of penicillin in abdominal wounds during the first investigation of its clinical application. Reports of its use in United States army hospitals by Lyons[3] and in the British Army by Jeffrey[4] seemed further to indicate that penicillin had at most a limited field of usefulness in abdominal wounds. Meleney[5] in 1946, in a systematic study of penicillin in established infections in over 744 cases, came to the conclusion that of the poorest results of penicillin therapy, the worst of all were in diffuse peritonitis.

On the other hand, an increasing number of papers has appeared lately which differ markedly from these views. Results of both clinical and experimental work have been published, which are completely at variance with the predictions of the early theories.

In 1944 Kalisova[6] reported a case of severe peritonitis with a mixed infection from a gangrenous appendix, which he successfully treated by administering penicillin through a drainage tube every three hours, 280,000 units in all being given. This treatment was not started until over twenty-four hours after operation, at a time when the child was desperately ill, going downhill and not responding to sulphapyridine.

In 1945 Wollgast[7] reported the results of the prophylactic use of penicillin in fifty abdominal cases. To five patients, who were critically ill with generalized peritonitis, penicillin was administered parenterally at a late stage for a few days. All five patients died. In the next twelve cases treatment was begun at operation; seven patients received penicillin by the intraperitoneal route (three 50,000 units, four 100,000 units, diluted in 30 to 50 millilitres of normal saline solution). Intramuscular injections were also given at intervals of three hours in dosages varying from 80,000 to 160,000 units every twenty-four hours. Sulphonamides were administered at the same time. In the reports of these cases, which are given in full, the great improvement in the results in those cases in which 100,000 units were given intraperitoneally is evident. As a result of the observation of a further 25 patients with infected wounds (for example, colostomies *et cetera*), Wollgast concluded that definitive operation on contaminated wounds may be carried out earlier and with greater safety when penicillin is administered prophylactically.

Merle Brown[8] reports the recovery of a patient suffering from peritonitis associated with a gangrenous appendix, which was regarded as "almost phenomenal, compared to any previous methods of therapy". Seven cases are referred to in which both penicillin and sulphonamides were used intraperitoneally. At first "a saline solution of 50,000 units of penicillin was injected by syringe and long needle into the pelvis. Later, 100,000 to 200,000 units were placed intraperitoneally in the dry state". The author considers that penicillinase is not as completely inhibitive of penicillin as the first experimental work would indicate.

W. Griffin and others[9] administered penicillin and sulphadiazine prophylactically to 108 patients operated on at the Cook County Hospital for acute appendicitis. An intramuscular injection of 20,000 units of penicillin was given immediately before operation, and the same dose was continued every three hours for four days after operation. For the same period the patient was given one gramme of sulphadiazine four times a day. The authors found that in addition to a definite reduction in mortality there was a concomitant reduction in morbidity. The patients were more comfortable. They had less abdominal pain and abdominal distension and left the hospital at an earlier date.

R. M. Hadfield-Jones, who contributed the chapter of "Abdominal Infections" in Fleming's book,[1] recommends the use of penicillin in a number of acute abdominal conditions. These include pneumococcal and streptococcal peritonitis, paralytic ileus, retroperitoneal and pelvic cellulitis, diverticulitis, appendicitis treated expectantly, acute suppurative cholangitis, acute pyelephlebitis and acute cholecystitis. In acute diffuse peritonitis, he recommends that "penicillin should be used in addition to sulphanilamide powder to dust the whole operation area". In pneumococcal peritonitis it is recommended that penicillin should be given and the abdomen not opened; however, if a laparotomy is performed, penicillin should be applied locally and the wound closed without drainage; injections are then continued after the patient is returned to bed.

Crile and Fulton[10] have found that penicillin in large doses appears to have a definite effect in controlling peritonitis due to appendicitis. They report a series of 1,300 appendicectomies with one death. "On several occasions, intra-abdominal masses which developed during the administration of penicillin in doses of 25,000 or 50,000 units every 4 hours resolved completely when 100,000 units were given every 2 hours." In the management of acute appendicitis after forty-eight hours, these authors do not recommend operation. If localized peritonitis or a walled-off abscess is present, they recommend that penicillin should be given in large doses. They make the following statement:

> . . . 100,000 units, intramuscularly every 2 hours for 2 days, then 50,000 units every 2 hours for 2 days, followed by 50,000 units every 4 hours for 2 days, and finally 25,000 units every 4 hours for 2 days—a total dosage of 4,500,000 units in 8 days—will usually control peritonitis and allow complete resolution of the infection without the formation of abscesses.

On the experimental side, Fauley, Duggan and others[11] produced fulminating peritonitis in dogs by ligating the base and blood supply of the appendix and then treating them with penicillin. The mortality rate among 27 untreated dogs was 92·6% compared with no death among 48 dogs, treatment of which with penicillin was started one hour after operation. When the treatment was delayed for twelve hours, the mortality rate was 21%. From these experiments the dosage required parenterally was estimated at 150 units per pound, or 22,500 units per hour for a man weighing 150 pounds—that is, about half a million units a day. They conclude from these experiments that penicillin, if given early in adequate dosage, will completely control experimental peritonitis in the dog. The experiments indicate that large doses of penicillin should be given initially in generalized peritonitis.

Blain, Kennedy and others[12] investigated the effect of penicillin in experimental intestinal obstructions, and the cure of strangulated ileal obstructions treated with penicillin prior to late resection. They found that penicillin prolonged the lives of animals with strangulated obstructions to twice the period of survival of untreated controls, and to a time at which successful resection was able to be performed. On the basis of these experiments they recommend therapy with massive doses of penicillin in all cases of acute intestinal obstruction.

Harper and Blain[13] showed that the lives of dogs having isolated obstructed jejunal loops could be prolonged for significant periods of time when penicillin was placed in the loops or was given intramuscularly. Blain,[14] referring to this work, makes the following statement:

> It was widely held at that time that penicillin was not effective against the Gram-negative bacilli. This study demonstrated that for all practical purposes, penicillin in large doses was effective *in vivo* against all the intestinal tract bacteria. It was found that marked distension of the loop occurring in the presence of bacteriostatic agents was compatible with life. Microscopic and bacteriological evidence was presented to show that penicillin given prophylactically in large doses, whether in a loop or parenterally, can prevent infection of the distended intestinal wall by the normal intestinal flora.

On the basis of these experiments, Blain considers that a clinical trial of massive antibacterial therapy for acute mechanical small bowel obstruction is warranted as an adjunct to early and adequate surgical intervention, and that this type of therapy is likely to lower significantly the present intestinal obstruction mortality.

These reports and experiments relate to the use of penicillin in peritonitis and acute intestinal obstruction. The purpose of the present paper is to support these views, and further to suggest that there is an even wider field for the use of penicillin in abdominal surgery. It is recommended that penicillin should be used as a routine measure in all major abdominal operations, that its application should be intraperitoneal and that it should be applied in large doses. It is believed that chemotherapy and particularly the use of penicillin will go far to eliminate intraperitoneal infection as a serious factor after most abdominal operations.

During the past three years penicillin has been used by me in abdominal cases over a large series of patients and in a variety of ways. At first it was used only by intramuscular injection in the treatment of patients with peritonitis. It was then used intraperitoneally in cases of frank peritonitis at the time of operation, and later in most, and then in all, acute abdominal emergencies. Other patients were given injections of 60,000 units of penicillin before they left the ward for operation to give them

penicillin "cover" during the operation. In many of these treatment was continued by intermittent intramuscular injections after operation. Later, penicillin was placed in the peritoneal cavity before closure after all major operations, at first in doses of 100,000 units and later in doses of 200,000 units. The penicillin has been used dry or dissolved in a few millilitres of water. The use of dry penicillin distributed around the abdomen with an ordinary spoon has been adopted. The method has now been used in all types of abdominal operations, including acute abdominal emergencies, intestinal obstructions and gastric and bowel resections. It appears to be particularly effective in operations on the biliary tract.

In all the cases in which penicillin has been used intraperitoneally, the post-operative course has been milder and the abdominal discomfort, distension, vomiting and other complications have been lessened. In modern surgery death rates are so low that alterations one way or the other are of little statistical significance. Whilst it is admitted that clinical impressions are of no particular scientific value, a surgeon working under the same conditions with the same teams is able to assess improvements and form judgements in comparison with past experiences. Such judgements form the basis of the practice of every surgeon. They are of real value, although their actual value can be measured only by improvement in mortality and morbidity rates in large communities or institutions after their general adoption. It is therefore not proposed to submit the series of early cases on which by trial and error the present routine has been built, but merely to present in abstract a selected number of illustrative cases in which operation has been performed within recent months. It is thought that there exists sufficient evidence for full investigation. This paper represents the beginning and not the end of such an investigation.

In the following cases 60,000 units of penicillin were given immediately before operation. At operation 100,000 units were placed in the peritoneal cavity and post-operatively intramuscular injections of penicillin were given.

Reports of Cases.

CASE I.—An operation for gastro-jejuno-colic fistula was required. The patient was a man, aged forty-eight years. He was very weak and emaciated with a severe degree of hypoproteinæmia. He had lost four stone in weight. Some years earlier, at another hospital, a Devine gastric exclusion with a posterior gastro-enterostomy had been performed. He was admitted to hospital in March, 1947. He was given transfusions of blood and prepared for operation. Immediately prior to operation 60,000 units of penicillin were given. At operation on March 31, 1947, the fistula was excised and the openings were closed and covered by omentum; 100,000 units of penicillin were placed in the peritoneal cavity. Blood transfusions were given during and after the operation. The patient made a rapid and uninterrupted recovery. After operation intermittent injections of 20,000 units of penicillin were given every three hours. In all, 2,500,000 units were given. The post-operative course was completely smooth; he had a cough for several days and vomited only once. Distension was only slight; his bowels acted by themselves on the sixth day. A further transfusion was given on the eighth day. The patient was up on April 14 and was discharged from hospital three weeks later, having put on over a stone in weight.

CASE II.—An abdomino-perineal resection of the rectum was performed. The patient was a woman, aged seventy years, somewhat frail, but in good general condition. She had a large carcinoma of the rectum and was admitted to hospital one week prior to operation. Abdomino-perineal resection of the rectum was performed on May 9, 1947; 60,000 units of penicillin were given immediately before operation and 100,000 units were placed in the abdominal cavity before closure. The posterior wound was closed without packing, one drainage tube being left in the perineum. The administration of penicillin was continued every three hours in doses of 20,000 units post-operatively. Penicillin solution (500 units to the millilitre) was injected into the perineal tube twice a day. The tube was removed on the fifth day. Blood was given during the operation, and phthalyl-sulphathiazole by mouth before and after operation. This patient made an uneventful and rapid recovery with no abdominal distension. The perineal wound was completely healed within three weeks and the patient left hospital within a month after operation.

CASE III.—An operation for sigmoido-vesical fistula and closure of a colostomy opening was carried out. The patient was a man, aged forty-five years, who was first examined in consultation on December 31, 1946. He was passing fæces in considerable quantities through the urethra. A transverse colostomy was performed. A second operation was performed on January 21, 1947, and a large diverticulum of the sigmoid colon was found communicating with the bladder through a large hole near its base. The diverticulum was disconnected from the bladder and the hole in the bladder was sutured. The diverticulum was then removed. Prior to his leaving the ward 60,000 units of penicillin were given, and at operation 100,000 units were placed in the peritoneal cavity. A catheter was tied in the bladder. No drainage was used in the peritoneal cavity. The patient made a rapid recovery without any abdominal distension. Three months later, on May 6, 1947, the patient returned for closure of the transverse colostomy opening. This was done without opening the peritoneum, and a tube was placed in the wound to the site of the closure. Alimentary rest was instituted for about seven days after operation, and the patient made a rapid recovery without any distension. About 1,000,000 units of penicillin were given by intermittent injection post-operatively. The bowels acted on the fifth day after operation. Phthalyl-sulphathiazole was given by mouth before and after operation. At no stage after any of his operations was there any post-operative discomfort or distension.

CASE IV.—Operation was required for resection of the sigmoid and closure of a colostomy opening. The patient was a man, aged sixty-seven years. On October 30, 1946, a resection of the sigmoid colon was performed, and a transverse colostomy was performed at the same time; 100,000 units of penicillin were placed in the abdominal cavity during the operation. He made a good recovery and returned for closure of the colostomy. This was done on May 21, 1947. The colostomy opening was completely separated and the abdominal cavity opened; 100,000 units of penicillin were placed in the peritoneal cavity, the abdomen was completely closed and no drainage was used. Phthalyl-sulphathiazole was given by mouth before operation and 60,000 units of penicillin before the patient left the room; 1,000,000 units of penicillin were given post-operatively by intermittent intramuscular injection in doses of 20,000 units every three hours. His bowels were opened by enema on the sixth day. This patient had no post-operative vomiting. His post-operative recovery was remarkable for its smoothness and there was at no time any suggestion of abdominal discomfort or distension.

In the following cases, 60,000 units of penicillin were given immediately before operation; at operation 200,000 units were placed in the peritoneal cavity, and post-operatively the administration of penicillin was continued.

CASE V.—An operation was required for gastro-jejunal ulcer and gall-stones. The patient was a man, aged seventy years. About thirty years previously he had had a gastro-enterostomy. Apparently a gastro-jejunal ulcer had formed, and fifteen years later the gastro-enterostomy was undone and a posterior Pólya gastrectomy was performed, most of the stomach being left.

The patient was admitted to hospital a week before operation. He was weak and emaciated. X-ray examinations showed gall-stones to be present, and revealed an almost complete twenty-four hours' residue in the stomach. He had also previously undergone a prostatectomy operation. He was operated on on April 30, 1947. Before he was taken to the operating theatre 60,000 units of penicillin were given. At operation the anastomosis was undone; excision of the gastro-jejunal ulcer required an enterectomy, portion of the stomach was removed, and a posterior Pólya anastomosis was carried out. A cholecystectomy was also performed. At the time the cholecystectomy appeared simple, as there was a mesentery to the gall-bladder. However, during the suturing of the bed of the gall-bladder, considerable hæmorrhage occurred. On account of this it was not thought wise to close the abdomen without drainage, and a tube was inserted through the centre of the wound, which had been made through the previous incisions; 100,000 units of penicillin were placed in the peritoneal cavity before closure. A catheter was tied in the bladder. Intramuscular injections of 20,000 units of penicillin were given every three hours. The drainage tube was removed on the fourth day, and it left some gaping of the wound, which was strapped across. On May 10 the patient gave a cough, and a loop of small intestine appeared in the wound. "Pentothal" was given,

the loop of small bowel was replaced, and three silkworm gut sutures were placed in the wound. During this procedure the peritoneal cavity was seen and the local effects of the 100,000 units of penicillin previously placed there on April 30 were noted. This investigation showed the peritoneum and bowel to be glistening and normal in appearance. There was no sign of adhesion, but remarkable freedom from any sign of reaction. Before closure 200,000 units of penicillin were placed in the peritoneal cavity. There was not the slightest sign of any post-operative disturbance.

I was so impressed by the post-operative course in this case that I decided to use 200,000 units as a routine measure in all future cases. Penicillin was also given by intramuscular injection before and after the operations.

CASE VI.—Right colectomy and excision of portion of the duodenum were performed. The patient was a man, aged sixty-two years, who was desperately ill. X-ray examination revealed a large filling defect in the hepatic flexure. He was passing large quantities of blood. Blood transfusions were given. In view of the continued and excessive hæmorrhage, preparation was cut short. In spite of transfusions, the patient was losing so much blood that operation had to be deferred, and after three further litres of blood had been given over a space of about eighteen hours, operation was performed on May 17, 1947. Phthalyl-sulphathiazole was given by mouth, and twenty-four hours before operation the administration of penicillin was begun in doses of 20,000 units intramuscularly every three hours; 60,000 units were given immediately before operation.

At operation a large carcinoma of the hepatic flexure was found involving the right side of the peritoneum and the anterior wall of the duodenum. A right hemicolectomy was performed, which included the growth, the glands in the mesentery and the adherent portion of the peritoneum. The portion of the duodenum involved was also removed. A further two litres of blood were given during and after the operation; 200,000 units of penicillin were placed in the peritoneal cavity before closure. The administration of penicillin was continued post-operatively at the rate of 20,000 units every three hours. The patient recovered without any vomiting or abdominal distension. His bowels acted on their own accord on the third day and then twice a day. Fever was present in this case, the patient's temperature rising to about 100° F. for about ten days, when it subsided and the penicillin therapy was discontinued. As the fever then recurred, penicillin therapy was again started; the temperature subsided within a few days. The fever was probably due to a urinary infection rather than to any intraperitoneal cause. X-ray examination after operation revealed no elevation of the diaphragm. Blood counts revealed slight leucocytosis.

This patient, although he had no vomiting or abdominal distension, appeared ill throughout. It is probable that his recovery was largely due to the penicillin. He was discharged from hospital on June 23, well, but somewhat weak.

CASE VII.—Partial gastrectomy, partial pancreatectomy and splenectomy were performed. The patient was a woman, aged sixty-one years, suffering from a large carcinoma of the middle third of the stomach, which was adherent to the pancreas and transverse colon. She was admitted to hospital on May 15, 1947. Three litres of blood were given before, during and after operation; 60,000 units of penicillin were given immediately before the operation. On May 22 about five-sixths of the stomach were resected together with the great omentum, portion of the transverse mesocolon, the left two-thirds of the pancreas, and the spleen; 200,000 units of penicillin were placed in the peritoneal cavity before closure, and post-operatively 25,000 units were injected every three hours. The post-operative course of this patient was remarkably smooth, without any vomiting or abdominal distension or much discomfort. For about six days she had an irregular rise in temperature to 100° F. She was discharged from hospital on June 15.

CASE VIII.—Abdomino-perineal resection of the rectum was required. The patient was a woman, aged thirty-nine years, with a large carcinoma of the rectum somewhat adherent on the right side. An abdomino-perineal operation was performed on May 22, 1947. The operation was somewhat difficult, as there was very little clearance on the right side of the pelvis. The posterior wound was closed with one tube and no packing. Three litres of blood were given before, during and after operation; 60,000 units of penicillin were given immediately before operation; 200,000 units were placed in the abdominal cavity before the peritoneum was closed, and intramuscular injections of 20,000 units every three hours were continued after the operation. The post-operative course was smooth and uneventful. The perineal wound was completely healed before the seventeenth day, and the patient left the hospital on June 22.

CASE IX.—Cholecystectomy and resection of a carcinoma of the sigmoid colon were performed. The patient was a woman, aged sixty-three years. She was admitted to hospital on June 17, 1947, with a history of severe attacks of gall-stone colic. At operation on June 19 adhesions were found around her gall-bladder and numerous gall-stones in the gall-bladder. During abdominal examination an early ring carcinoma was felt in the sigmoid colon. The gall-bladder was removed and a transverse colostomy opening was established in the lower angle of the wound. This was opened a week later. Before the abdomen was closed, 200,000 units of penicillin were placed in the peritoneal cavity, so that at the subsequent operation the effect of this quantity of penicillin on the peritoneum could be noted. The patient had a smooth convalescence.

On July 3 the second operation was performed. The carcinoma of the colon was resected and a further 200,000 units of dry penicillin were placed in the peritoneum before closure. The administration of penicillin intramuscularly was continued for several days after operation. At the second operation examination of the peritoneum showed it to be perfectly normal in every way, with no evidence of any adhesions or other abnormality. Her progress was uninterrupted and she was discharged from hospital on July 22, 1947, to return later for closure of the colostomy opening.

CASE X.—Primary resection of a recurrent carcinoma of the splenic flexure was performed. The patient was a woman, aged forty-seven years, with a rather unfortunate history. In 1944 she had had a subacute intestinal obstruction from a carcinoma of the splenic flexure. A Paul-Mikuli operation was performed. She remained well after this until January, 1947, when she was examined on account of a large swelling in the left side of her pelvis. At operation on January 19 a large suppurating cyst of the left ovary was found discharging into the peritoneal cavity. This was removed and 100,000 units of penicillin were placed in the peritoneal cavity. The site of the previous operation on the bowel was examined. It was found to be constricted and to have a small recurrence in the mesentery. After operation 40,000 units of penicillin were injected intramuscularly every four hours until 2,250,000 units had been given. The pathological examination revealed papillary adenocarcinoma of the ovary. She was discharged from hospital on February 6.

A course of radiotherapy was given. She was again admitted to hospital and a further operation performed on June 30. At operation a primary resection of the splenic flexure was performed. Many adhesions were present. These were attributed to the radiotherapy. Two hundred thousand units of penicillin were placed in the peritoneal cavity and the abdomen was closed. Prior to operation phthalyl-sulphathiazole was given by mouth in small doses, and immediately before operation 60,000 units of penicillin were injected. Injections of 20,000 units intramuscularly were continued every three hours after operation. There was no distension, and the patient was able to pass flatus *per rectum* on the third day. She did not vomit for two days, when she felt nauseated. This was due to the sulphonamide tablets, and it ceased as soon as they were discontinued. The temperature was irregular, but it had settled on July 5. The penicillin was discontinued. The temperature rose again in a staircase manner, and 300,000 units of penicillin were given in two days, with an immediate drop in temperature. The temperature again rose during the next week, and redness and inflammation appeared in the posterior angle of the wound. This was due to an extraperitoneal abscess, which began to discharge pus on July 17. On July 18 the pus became fæcal. Penicillin (40,000 units every three hours) was again given, and on July 21 the administration of phthalyl-sulphathiazole by mouth was also begun. The temperature gradually settled and was normal by July 25. The patient felt well and was allowed out of bed on July 27. The drainage from the wound soon ceased and she was discharged from hospital.

CASE XI.—Choledochotomy, cholecystectomy and appendicectomy were required. The patient was a female, aged fifty-eight years, who had been admitted to hospital on July 16, 1947. She was deeply jaundiced and had a history of attacks of gall-stone colic over the previous six months, which had become more severe during the previous three weeks. Pre-operative preparation included injections of penicillin, 40,000 units being given every four hours for two days prior to operation; 100,000 units were given the night before operation and the intermittent injections were discontinued until next morning. A further 100,000 units were given half an hour before operation. At operation on July 24 the common bile duct was opened, cleared of a large

disintegrating calculus and sutured. The gall-bladder was also removed. There were very thick adhesions around the appendix, and the caecum and the appendix were also removed; 200,000 units of dry penicillin were placed in the abdominal cavity, and the abdomen was closed with one drainage tube in the wound down to the common duct. This tube was removed three days later. Post-operatively intermittent injections of penicillin (40,000 units every four hours) were continued for a week. No vomiting, distension or discomfort occurred, and the temperature remained normal except for two small rises to 99° F. on the third and fourth days. She was discharged on August 14, with the jaundice rapidly fading.

CASE XII.—Excision of the duodenum and of the head of the pancreas was undertaken. The patient was a female, aged seventy-four years. She was admitted to hospital deeply jaundiced on July 14, 1947. For several days prior to operation intermittent intramuscular injections of penicillin (20,000 units) were given every three hours. At operation on July 22 a carcinoma of the head of the pancreas was found. This was excised with the duodenum. The resulting anastomoses were a Billroth II gastrectomy, an end-to-end pancreatico-jejunostomy, an end-to-side choledocho-jejunostomy and a cholecystostomy; 200,000 units of dry penicillin were placed in the peritoneal cavity before closure, and penicillin therapy was continued by intermittent injections every three hours after her return to bed. One litre of blood was given during operation and a further litre after operation. At the conclusion of the operation, which took about two and a half hours, the patient's blood pressure was about 130 millimetres of mercury (systolic) and 80 millimetres (diastolic), and the pulse rate about 90 per minute. For forty-eight hours after the operation the patient was somewhat stuperose. On the third day her mental condition was normal, but she had some signs of atelectasis at the base of the left lung. An expectorant mixture was given and the dosage of penicillin was increased to 500,000 units a day. This resulted in rapid improvement in her condition. The nursing of the patient was complicated by the presence of a large uterine prolapse; however, this was controlled by the insertion of a large ring pessary. The temperature was normal throughout except for a rise to 100° F. on the second day. Post-operatively there was no distension or vomiting. The patient continued to make very satisfactory progress. On August 18 she had a severe attack of gastro-enteritis which left her very weak. She is still in hospital.

Discussion.

Fleming,[15] in his original observations in 1926, showed that the introduction of penicillin into the abdominal cavity caused no reaction. In one of the cases reported above (Case V) the peritoneal cavity was seen to be normal and free from adhesions ten days after 100,000 units of penicillin had been placed in it, and in another (Case IX) the same appearances were found fourteen days after 200,000 units had been used. In a third case (Case X) dense adhesions were found six months after 100,000 units had been introduced; but in this case, not only had general peritonitis been present at the previous operation, but the area had been subjected to a course of deep X-ray therapy.

Penicillin has been placed in all body cavities, and with the exception of the dural space, no ill effects have been observed or reported. The nature of this occasional effect on the dural space is not quite clear. It is possible that it is due to impurities in certain samples of penicillin. The introduction of large quantities of Australian Commonwealth Serum Laboratories penicillin into the dural space of children without ill effect has been reported by Elizabeth Turner.[16] Only penicillin of a purity greater than 800 units per milligramme should be used. The purity is marked on all overseas products, but curiously is not marked on Australian penicillin. In the cases which have been described, two brands of penicillin have been used—calcium penicillin from the Commonwealth Serum Laboratories and sodium penicillin made by Glaxo Laboratories. In the early stages of penicillin therapy it was considered that the powdered sodium salt was too irritating for local use.[3] Both calcium and sodium penicillin have been used in the cases reported without any evidence of injurious local effect. Sodium penicillin is probably preferable at present in Australia, owing to the greater purity of the available sodium salt compared with the calcium salt.

There is considerable evidence to suggest that penicillin does not penetrate well into serous fluids when given by intravenous or intramuscular injection, and that to obtain high levels in these fluids the penicillin is best applied locally within the cavity; further evidence suggests that the rate of excretion of penicillin from the peritoneum is slow, and that when it is applied locally in the peritoneal cavity in large doses an effective concentration may remain over a long period.

Ory and others[17] investigated the penicillin levels in serum and other body fluids during systemic and local therapy, and found that during continuous intravenous and intramuscular therapy fairly constant levels were maintained in the serum of any given patient; but the levels might vary in different patients receiving the same dose. During treatment by intramuscular injection it was not possible to detect penicillin in the cerebro-spinal fluid, and levels in the pleural, peritoneal and synovial fluids were erratic and usually lower than serum levels. Adequate concentrations usually remain in the cerebro-spinal fluid and in the pleural and pericardial fluid for twenty-four hours or longer after local injections of large amounts.

Lady Florey and Heatley[18] in 1945 carried out an investigation to ascertain whether a suitable dose of penicillin injected into serous or abscess cavities would not only act locally, but would produce a prolonged and effective level of the drug in the blood stream. They found that injections of 120,000 units into a pleural cavity, after aspiration of an effusion, ensured a bactericidal concentration of the drug in the blood stream for twenty-four hours or more; 240,000 units produced a similar effect lasting for about forty-eight hours. Other papers by Shafiroff,[19] by Greene and by others[20] support this view, and show that blood levels obtained by peritoneal absorption are more sustained than those obtained by the usual intravenous and intramuscular injections.

When the reasons for the great variations of opinion concerning the value of penicillin in abdominal surgery are considered, it would seem that the original theory that the "dominant infections of the abdominal viscera are by organisms insensitive to penicillin" is not supported by clinical evidence.

So far as can be found in the literature, apart from the early service reports, the only opposing clinical report based on evidence is that of Meleney.[6] It is suggested that the cases on which Meleney bases his report are similar to the five cases in Wollgast's series referred to above, in which all the patients died. The main reason for the variations would appear to be that one set of observers is referring to patients treated early or prophylactically by large doses or by the intraperitoneal application of penicillin, whilst Meleney and others are referring to the treatment of established infections, often at late stages, by small parenteral injections.

Clinical evidence strongly suggests that the element of infection in abdominal surgery can be completely controlled by the efficient administration of penicillin. For efficient administration of penicillin the following conditions require to be satisfied: (i) the penicillin must be given as early as possible, and prior to operation; (ii) the dose must be adequate; (iii) the distribution must be apt, and, if possible, should include local application; (iv) the administration must be persistent and intensive; (v) the administration must not be discontinued until any infection present has been fully controlled or until the danger of infection has passed.

There are a number of possible explanations of the beneficial post-operative action of penicillin introduced into the peritoneal cavity. Infection, even in minor degree, appears to be eliminated. Paralytic ileus is less frequent and the need for intestinal suction is diminished. One of the most noticeable features is the absence of post-operative distension. X-ray pictures taken after operation in comparable cases, with and without the intraperitoneal administration of penicillin, show significant differences in the distension of the bowel, there being an almost complete absence of distension in those cases in which penicillin has been introduced. The mechanism of this prophylaxis of distension is not clear. Post-operative retention of urine also seems to be a less frequent complication after the use of penicillin in this manner.

If the claims made in this paper can be sustained, penicillin is likely to have certain important effects upon the management of surgical conditions of the abdomen and the technique of abdominal operations. The ordinary methods of treatment of acute appendicitis, acute cholecystitis, salpingitis and pneumococcal peritonitis may be affected. Those occasions on which a surgeon may have doubts as to whether he should drain the abdominal cavity will be fewer. On the other hand, it is possible that the use of drainage tubes in serious cases may be an important method of introducing penicillin into the peritoneal cavity. In other cases in which drainage tubes may be used—for instance, in the perineal wound after abdomino-perineal resection of the rectum—instillation of penicillin solution into the tube several times a day undoubtedly has a most beneficial effect on the healing. It is possible that the dangers of primary resection of the colon will be considerably lessened, and there seems reason to believe that with sound pre-operative preparation and the use of sulphonamides and penicillin this operation may be able to replace the various stage operations which in the past have been necessary for greater safety.

The suggestions which are here set out for the administration of penicillin in abdominal surgery are purely tentative. What represents an adequate dose is not yet clear. A dose of 200,000 units intraperitoneally in most cases is recommended. The post-operative dosage necessary appears to be from 150,000 units a day to 500,000 units a day in serious or complicated cases. The experimental work of Fauley and Duggan[11] suggests that the adequate parenteral dose is about half a million units a day. These amounts are much greater than those in common use, and are in keeping with the recommendations of Crile and Fulton.[10]

Apart from this, there is another aspect of the post-operative dosage after the intraperitoneal use of penicillin which requires examination. If, as has been reported, penicillin is absorbed slowly from the peritoneal cavity and adequate blood levels are maintained for considerable periods after its introduction into the peritoneal cavity, it may be possible by suitable dosage to delay its administration post-operatively for hours or even days. This aspect is being investigated by Dr. R. Officer, of the Alfred Hospital, Melbourne, and Major P. L. Bazeley, of the Commonwealth Serum Laboratories, with whom it has been discussed.

Further, in regard to the method of administration of penicillin after operation, intermittent intramuscular injection only has been discussed. This is because it was the method which was used. Variations in methods and doses giving comparable blood levels could no doubt be substituted.

The following provisional suggestions are made for the use of penicillin in abdominal surgery.

1. In acute intestinal obstruction or generalized peritonitis, penicillin should be given intramuscularly as soon as possible in large doses of not less than 100,000 units every one or two hours. At operation 200,000 units should be distributed in the peritoneal cavity, and the administration of large doses of up to 100,000 units should be continued every few hours after operation.

2. In other types of acute abdominal emergency, "penicillin cover" should be provided with 100,000 or more units immediately before operation, 200,000 units intraperitoneally at operation and parenteral injections after operation in doses every one to three hours varying from 20,000 to 100,000 units, according to the patient's condition.

3. In the delayed treatment of appendicitis (Ochsner-Sherren method) and cholecystitis and for the treatment of pneumococcal peritonitis and of gonococcal salpingitis, 50,000 to 100,000 units should be given every few hours according to the condition of the patient, or the method recommended by Crile and Fulton may be followed.

4. In obstructive jaundice, 20,000 units of penicillin every three hours should be given before and after operation by intramuscular injection, and 100,000 units should be distributed in the peritoneal cavity at operation.

5. In operations for resection of the large bowel, or when a colostomy opening is present, sulphonamides should be given by the mouth for several days before and after operation. One hundred thousand units of penicillin should be given immediately before operation, 200,000 units should be placed in the peritoneal cavity at operation, and the intramuscular injections should be continued post-operatively, doses of 20,000 to 50,000 units being given every three hours.

6. In all other major abdominal operations, "penicillin cover" should be provided with 60,000 to 100,000 units before operation, 200,000 units should be distributed in the abdomen at operation, and post-operatively intramuscular injections should be given for about a week.

7. In minor abdominal operations (interval appendicectomy *et cetera*) 60,000 units of "penicillin cover" before operation, and 100,000 units distributed in the peritoneal cavity at operation, would appear to be all that is necessary.

8. In the presence of infection, when before operation a sinus or an infective area is present in the region of the operation field, penicillin injections should be given for several days prior to operation, and penicillin should be applied locally to any infected area or injected several times a day into sinuses; penicillin is then given as in a major abdominal operation.

9. In those cases in which drainage tubes are employed, penicillin solution (500 units per millilitre) should be run into the tube several times a day.

Summary.

There is strong evidence that chemotherapy and the use of penicillin, particularly by its local application to the peritoneal cavity, will go far to eliminate intraperitoneal infections in abdominal surgery. Methods for the use of penicillin are recommended.

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Reports of Cases.

INTRAOCULAR INFECTION AND PENICILLIN.

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THE following case of intraocular infection, illustrating the response to penicillin treatment, is, I think, worth recording.

Clinical Record.

Miss N.B., aged sixty-nine years, who had bilateral cataracts, was examined in July, 1945. Some mental instability was present, which had come on since the loss of her vision. Extracapsular lens extraction in September of that year was performed under "Pentothal" anæsthesia, and a flap was sewn over the wound, as it was suspected that convalescence would be uncertain. I was not disappointed in this; the patient tried every trick that might be conceived for the destruction of her eye. The ultimate result was a slight prolapse of the pillars of the iridectomy, which in the circumstances I was content to treat with trichloracetic acid. Her visual acuity was $^6/_{12}$ with correction. Her mental condition considerably improved. That is the preliminary story.

I did not hear of her again until September 25, 1946, that is, fourteen months later. On that occasion she was admitted to hospital with an infection of the anterior chamber of the eye, which had gained access along one of the prolapsed pillars of the iridectomy. The surface infection and the track down into the eye were obvious. The eye was discharging freely, the conjunctiva was tremendously red and swollen and the anterior chamber was almost full of pus, the whole presenting that type of picture seen rarely but tragically in a late infection through a trephine opening. It is because of the similarity of the two conditions and the ultimate outcome in this eye that I think the case is worth recording. The patient stated that she could dimly perceive a bright light when it was flashed on the eye.

Treatment was as follows. (i) Intramuscular injections of penicillin were given, first 50,000 units, and then 15,000 units every four hours. (Sorsby, in Fleming's "Penicillin", questions the value of this method of using penicillin in intraocular infections.) (ii) Penicillin drops were instilled into the eye (1,000 units per millilitre), every fifteen minutes for five hours, then every hour. (iii) Atropine was instilled and hot spoon bathing was applied.

The temperature was swinging to 100° F. and the patient's general condition was poor.

It was quickly seen that the eye was not going to respond to this treatment, and as the outlook for the eye was indeed bad it was decided to attack the anterior chamber directly. On September 26, the day after her admission to hospital, after a full dose of morphine and hyoscine had been given hypodermically, a keratome incision was made and some of the penicillin solution was used to wash out the anterior chamber with a lachrymal syringe. This procedure was repeated on September 27 and 28, the wound being opened each time by the insertion of a repositor. The hypodermic injection of morphine and hyoscine preceded the manipulation on each occasion. The intramuscular administration of penicillin was continued until she had received 1,000,000 units, and the penicillin drops were instilled several times each day.

The eye responded rapidly, and the patient was discharged from hospital on October 15. She continued to use the atropine at home for some weeks.

I did not examine her again until March, 1947. The pupil had contracted slightly, but the eye was free of inflammation, and she was using this eye to find her way about, as the cataract in the other eye was mature. The lens capsule filling the pupillary area was only slightly more dense than before the infection.

It was decided to do a discission, and this was done in March, 1947. Through the gap obtained it was possible to obtain a good view of the fundus and there appeared to be no evidence of any damage in the posterior segment of the eye. Here visual acuity with correction at the present time is $^6/_{24}$ and she is quite happy.

Comment.

A similar case to this has been reported by Schneider and Frankel.(1) In this case infection of the vitreous chamber followed some years after a trephine operation and was treated successfully by the injection of penicillin directly into the region affected. Arnold Sorsby, who writes in Fleming's "Penicillin" the section dealing with penicillin in ophthalmology, suggests that no more than 0·15 millilitre of penicillin solution (1,000 units per millilitre) should be injected into the anterior chamber.

A good deal of work is reported on the experimental treatment of intraocular infections with penicillin; but as yet few reports have been published on the effect of intraocular injections of penicillin in man.

Late infections after cataract operations are, of course, rare. Even late infections after trephine operations for glaucoma are rare enough, but tragically destructive.

Elliott, in his classical work on glaucoma, devotes considerable space to the subject of late infections following trephine operation, coming on as they do sometimes years after operation. The risk of such infection is always weighed carefully before the decision is made in any one case that an operation is absolutely necessary. One feels, therefore, that if penicillin is capable of dealing effectively with such infections, the problem of glaucoma is by so much made easier.

Reference.

(1) J. Schneider and S. S. Frankel: "Treatment of Late Post-Operative infections with Intraocular Injections of Penicillin", *Archives of Ophthalmology*, March, 1947, page 304.

Reviews.

A HANDBOOK OF PSYCHIATRY.

"A PRACTICAL HANDBOOK OF PSYCHIATRY", by Dr. Louis Minski, of the Maudsley Hospital Medical School, sets out, according to the dust-cover, to give the essentials of psychiatry for students, nurses, occupational therapists, physiotherapists and social workers.[1] The difficulties of providing a book suitable to such a heterogeneous group are obvious. Medical students, on the one hand, will find this work so concise and so shorn of any real explanation of psychiatric disorders as to serve mainly for revisionary purposes. On the other hand, to the average mental nurse, with an educational standard no higher than the primary final, much of the book will be quite incomprehensible, especially as a large number of technical terms are included without explanation.

In the chapters on ætiology and symptomatology of mental disorders, and on nursing and general management, the book follows so closely along orthodox lines that one feels that nothing new has been added. In its adherence to orthodoxy it still includes primary dementia under the dementias, and reiterates that most misleading statement that in schizophrenia "there is often a history of a brilliant school record". The text needs careful revision, because ambiguous or misleading statements occur as the result of incomplete revision or of the desire for excessive conciseness. For instance, the statement that two-thirds of epileptics tend to show progressive dementia surely is intended to refer only to epileptics in institutions.

Some of the statements are open to question, for example, that mechanical restraint is almost never used and then

[1] "A Practical Handbook of Psychiatry for Students and Nurses", by Louis Minski, M.D., F.R.C.P., D.P.M.; 1946. London: William Heinemann (Medical Books), Limited. 7¾" × 4¾", pp. 136. Price: 6s.

only as a last resort. Surely such restraint is preferable to manual restraint or prolonged seclusion, both of which are described without any reference to their dangers.

The best chapters in the book are those on specialized forms of treatment, which include amongst others full coma insulin, modified insulin, convulsion therapy and prolonged narcosis. These have been freely adopted from "Physical Methods of Treatment in Psychiatry" by W. W. Sargant and E. T. O. Slater, and are clear, useful and succinct. One may question the wisdom of having the patient restrained by jacket and straps during the electro-fit, whilst the position advised for the electrodes (two inches apart) would surely lead to undesirable post-operative confusion and increased amnesia. With these possible exceptions, however, this portion of the book provides a readily available summary of the methods, dangers and complications of modern physical treatment.

The final chapters on psychotherapy and occupational therapy, whilst brief, provide an outline of such forms of treatment sufficiently explicit for the student not especially interested in them.

DISEASES OF THE NERVOUS SYSTEM.

EVERY now and again it is our pleasure to read a book which so approaches perfection that only good can be said of it. Such a book is F. M. R. Walshe's "Diseases of the Nervous System", which has now reached its fifth edition[1] in six years—surely a remarkable achievement, as most of these years were years of war. Britain, indeed, "delivers the goods".

The medical student of the present day is fortunate in having two such companion books as those of Holmes and Walshe—one dealing with the nature and significance of the symptoms and abnormal signs which a patient with a neurological disorder may present, the other describing neurological diseases. It is interesting to recall that each is a Fellow of the Royal Society—the only two practising physicians, we believe, who have this high honour—and that each has been intimately connected with the National Hospital for Nervous Diseases, Queen's Square. It is no coincidence that this school has nurtured scientists as well as clinicians and that a body of literature "perhaps the most lucid in medicine" has originated in this place. The writings of Hughlings Jackson and the textbooks of Gowers, Kinnier Wilson, Holmes and Walshe stand as evidence of this.

The author sets out his aims in his preface, which in itself might be regarded as a textbook for prospective authors. He makes the following statement: "Yet few writers of the designedly simple textbook are found able to resist the temptation to mention, however briefly and uselessly, something of everything, and few are willing to face the imagined reproach that they have left out something new, rare or ingenious." Again: "I have tried to deal only with what is possible in general practice in the matter of diagnostic methods and of treatment, to strip the subject of unnecessary complexities and to confine myself to what I have seen and believe to be true." The reader "need not look in this book for lists or descriptions of the host of eponymous signs and syndromes, nor for the plague of polysyllabic words of classical derivation in too common use to describe disorders of function and pathological changes that can be discussed in plain English. He will find no more anatomy or physiology than the relatively few elementary facts necessary to the recognition and localization of nervous diseases". "What the clinical observer sees", he writes, "when he confronts his patient is a state of disordered function, one of a continuous series of such states that began with the onset of the illness and will continue to its end. The illness is not a simple matter of a lesion to be localized, but is a sequence of events. It is something with an existence in time as well as in space. Diagnosis must, therefore, concern itself as much with the life-history of the illness as with the anatomical seat of the disease process. It is equally essential that textbook accounts of disease should be based upon this notion of an illness as a process, the story of which is to be told." It can be said that Walshe succeeds in this aim, in which so many authors fail. This book may be read by all interested in medicine as an example of lucidity, of clarity, of thought and of wisdom. Such a footnote as the following would diminish the frequency of error in describing one of the most important signs in clinical medicine elicited daily by every practitioner.

> Despite what has been said in the preface concerning eponymous signs, the name of Babinski has become too firmly attached to the extensor plantar response to be detached now. Further, the alternative title "extensor plantar response" is incorrect, in that the response is one of dorsiflexion and not one of extension. It should be remembered also that the receptive field of the response may be a very much wider one than the sole of the foot, and, therefore, we may reasonably object to the perpetuation of such titles as Oppenheim's, Gordon's and Chaddock's reflexes, which are no more than the "extensor plantar response" elicited from different parts of its wide receptive field. Protest may here be made against the growing and objectionable practice of recording the state of the plantar response by the expressions "Babinski positive" and "Babinski negative". The first is tautological, the second erroneous, for there is only one Babinski response.

The general reader would derive great benefit from Walshe's remarks upon treatment, which are so pertinent that their repetition in these pages seems desirable. In dealing with the treatment of cerebral vascular disease he makes the following statement:

> We must bear in mind the very narrow limits within which we can hope to influence these states. They are essentially wearing-out processes in the arterial tree, and with them we necessarily fight a losing battle. Hypertension cannot be permanently reduced. Indeed, one of the consequences of unwise attempts to reduce it materially by dietary restrictions, purgation and other means may be to precipitate a cerebral thrombosis.
>
> If these foolish practices are usually indulged in at the behest of "healers" and cranks without medical training, it can hardly be denied that the ground has long been prepared for them by the dismal forebodings sometimes uttered to the subjects of hypertension by their duly qualified medical advisers, and by the excessive dietary and other restrictions imposed by them.

In dealing with subjects of intracranial aneurysm, Walshe advises that "in view of the fact that most of them are relatively young the temptation to frighten them into permanent valetudinarianism should be avoided. If life is to be worth living, some risks must be taken". Similarly, in connexion with epilepsy, we read the following remarks:

> There are few maladies in which doctors are more prone to wax gloomy when discussing prognosis, and the train of prohibitions which is often added by them may be a quite unnecessary addition to the patient's misfortune.
>
> In the case of children the unreasonable fear that continued medication will stunt the child's development, or in the case of adults that an addiction may be formed, too often leads, with the doctor's concurrence or not, to premature cessation of medication. Nothing could be more adverse to prognosis in the case of a child or adolescent who is developing recurrent fits than the too often given and fallacious counsel that he "will grow out of it" and, therefore, need no treatment, which it is, therefore, futile to undertake. Far too many epileptic subjects of long standing are to be encountered who have been deprived of treatment in the early phases of their affliction on one or other of these specious pleas, both the expression of culpable ignorance. Also impatience may lead to its abandonment in favour of fantastic dietary habits that are at once so popular and so futile. These, together with carelessness, too often interfere with treatment, lead to failure, and produce a widespread despondency in patients and doctors alike.

Much wisdom is packed into the section upon sciatica.

> The chronic case of sciatica presents one of the most difficult of therapeutic problems, and many remedies at first hailed as universally successful have had their brief day of apparent triumph and have passed, or are passing, into oblivion. They include stretching the nerve under anæsthetic, injecting it with normal saline solution, injecting the subcutaneous tissues of the thigh with oxygen, turpentine baths, cupping, "ray" treatment and electro-therapy of various forms. More recently epidural sacral injections of a normal saline solution containing novocain have been employed, while spa treatment and all that this implies in baths and mechano-therapy is still with us. In the individual case not one of these can be confidently relied upon to

[1] "Diseases of the Nervous System: Described for Practitioners and Students", by F. M. R. Walshe, M.D., D.Sc., F.R.C.P. (London), F.R.S., D.Sc. (Hon.), National University, Ireland: Fifth Edition; 1947. Edinburgh: E. and S. Livingstone, Limited. 9½" x 6", pp. 370, with many illustrations. Price: 16s.

secure relief, but it must be admitted that their frequent failure is often to be attributed to their use as a substitute for the only really essential element in treatment, namely, an adequate period of rest in bed. Rest is monotonous, lacks the impressiveness of electro-mechano- and "ray" therapy, and may be economically difficult or impossible, yet an adequate period of rest is not seldom far more economical in the long run than a changing over from one method of active treatment to another.

A final balance of opinion as to the indication for surgical intervention has not yet been reached. Each case must be considered on its merits: the severity of pain, its duration, tendency to recurrence, the nature of the subject's work and so on. This can be stated, however, that laminectomy for this lesion should be expertly performed if it is not to produce a disability as severe as that it is designed to remedy.

Finally, in connexion with disseminated sclerosis, Walshe writes as follows.

Few maladies of the nervous system fill the doctor with a more humiliating sense of helplessness than this. There is no form of medication that has any certain influence upon the course of the malady, though its variable behaviour and its tendency to temporary remission have in the hands of those not familiar with it led to many unfounded claims for various remedies.

The author is conservative in his views, but his is not the conservatism which retards progress; rather, by pruning away much dead wood, he reveals a sure basis for advancement. Many of his own researches are included in the book without any reference to their origin. It will be gathered from this that the book falls into the class of very good books. It now has a very attractive form—it has abandoned its "battle dress". The nine illustrations of the first edition have increased to 59, each of which is excellent and carefully chosen for the part it plays in amplifying the text. No student or practitioner of medicine should be without this book.

THE ART OF HEALING.

BERNARD ASCHNER'S book on "The Art of Healing" is curiously contradictory in nature.[1] On the one hand he extols a simple type of treatment, which he calls constitutional therapy and which is presented as a new system of medicine, while on the other he looks back not only to the Vienna of his early years, as is natural, but also past Sydenham and Paracelsus to Galen and to Hippocrates. There is much in his contention that some of the simple therapeutic measures of the earlier physicians are often forgotten to the disadvantage of the modern patient; but surely the answer is balance and breadth of view in medical education. Aschner's pathology sometimes seems to savour of the sick room exposition, and his case histories are not free from the stigma of the *non sequitur*. His cautions concerning the just limitations of surgery are not baseless, and his constant advice to look at the patient as needing more than circumscribed therapy directed only at one ailing organ or system is sound. Venesection still has its definite indications, and occasionally emetics may be called for; leeches might be hard to come by nowadays, but counter-irritation yet has value, though probably the author would not agree with the doctor of an earlier generation who carried a Corrigan's iron in his pocket. Aschner has his ideas about diet. He pours a proper scorn on the baby food method of treating peptic ulcers, though some might hesitate to follow his advocacy of meat and his praise of black coffee. It is surprising to read of the perils of closing the pores of the skin, reinforced by the old anecdote of the gilded boy of the mediæval festival. At the same time, despite the use of blisters and cups and artificial ulcers, he sees some hope that biochemistry will in the future yield a successful method of treating *angina pectoris* through the blood. Perhaps some such hope may not be entirely illusory. We would hope, however, that without the aid of biochemistry or of a traditional system of medicine revived to fitful life, any intelligent practitioner could and would treat Dr. Aschner's overweight patient with hypertensive vascular distress just as aptly as he did. It does need unusual balance to practise medicine today, for much of our scientific knowledge is tentative in application. We do need also to hold fast to the good things of our fathers, and even our forefathers, provided that they satisfy a critical sense. But there are extremes to be avoided; the patient should not be glimpsed dimly through a dossier of graphs and decimals, neither should the inspirations for his treatment go back to Methusaleh. This book makes one feel how little we have advanced in many ways; but in justice it must be said that there is far more in the other scale than the author tells. Though it is interesting to read, it is in the main a popular exposition of ideas which are cherished by the writer, but for which he advances very little proof on the whole.

[1] "The Art of Healing", by Bernard Aschner, M.D.; 1947. London: Research Books, Limited, and William Heinemann (Medical Books), Limited. 7½" × 4¾", pp. 350. Price: 12s. 6d.

FINAL EXAMINATION PAPERS.

"THE M.B., B.S. FINALS", by Francis Mitchell-Heggs, presents a collection of the papers set at the London University M.B., B.S. examination for the years 1932 to 1945, classified and arranged in suitable subdivisions, and the third edition of this useful publication now appears.[1] Naturally the book will be of greatest value to students sitting for the specific London examinations; but at the same time students at all medical schools will find a very useful guide to their own "finals" in these questions, especially as the high standard of the London degrees in medicine and surgery is universally recognized. All the questions have been tabulated under the different bodily systems, and this arrangement enables a ready reference to be made to any particular subject. A list of the regulations governing the examinations is also given.

CLINICAL BIOCHEMISTRY.

A SIXTH edition of "Clinical Biochemistry", by Dr. Ivan Maxwell, has just been issued.[2] The fifth edition was reviewed in this journal in 1944. The book has been revised, and several new methods have been described in it. These include estimation of "acid" phosphatase in blood serum, of sodium and potassium in serum, and of the proteins in serum. The former chapter on basal metabolism has become expanded into a chapter on endocrine glands. The parts of the book devoted to discussion and summary of relevant physiological information have been revised and expanded, and some new references to suitable literature are included. Otherwise the book follows the line of the fifth edition. It is still primarily a manual for use in the medical course in the University of Melbourne; but physicians may find it a useful source of information on this subject.

Notes on Books, Current Journals and New Appliances.

A POCKET MEDICAL DICTIONARY.

THE seventh edition of "A Pocket Medical Dictionary", by Sister Lois Oakes and Dr. Thomas B. Davie, is to hand.[3] This is a useful little book if its naturally limited scope is kept in mind. Probably it will be appreciated most by nurses, by ambulance officers, and by non-medical people who engage in hospital and first-aid work in a voluntary capacity; but on occasion it may be of service to medical students and even medical graduates. So small a work could not be expected to be in any sense complete; but this little dictionary appears to contain a judicious selection of the medical terms in common use, and the definitions given are clear and reasonably full. It is well illustrated and as up to date as could be expected, well printed and well set out.

[1] "The M.B., B.S. Finals", by Francis Mitchell-Heggs, T.D., M.B., B.S. (London), F.R.C.S. (Edinburgh); Third Edition; 1947. London: J. and A. Churchill, Limited. 8" × 5¼", pp. 116. Price: 8s. 6d.

[2] "Clinical Biochemistry", by Ivan Maxwell, M.D., B.S., M.Sc., B.Agr.Sc., F.A.C.I., F.R.A.C.P.; Sixth Edition; 1947. Melbourne: W. Ramsay (Surgical) Proprietary, Limited. 8" × 5¼", pp. 506. Price: 40s.

[3] "A Pocket Medical Dictionary", compiled by Lois Oakes, S.R.N., D.N. (London and Leeds), assisted by T. B. Davie, B.A., M.D. (Liverpool), F.R.C.P. (London); Seventh Edition; 1946. Edinburgh: E. and S. Livingstone, Limited. 4¾" × 3¼", pp. 471. Price: 4s. net, postage 3d.

The Medical Journal of Australia

SATURDAY, SEPTEMBER 6, 1947.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

THE MEETING OF THE FEDERAL COUNCIL.

THE meeting of the Federal Council which is reported in this issue of the journal was held, as it were, out of season. As a rule two meetings of the Council are held every year, one in the early months, at the end of February or March, and the other in the latter half of the year, about the end of August or in September. During the last year or two meetings have been held oftener than usual, and this has been chiefly the result of the declared intentions of the Commonwealth Government and of its introduction of contentious and far-reaching legislation. The recent meeting was held in July instead of in September because of the conference that was to take place between the Minister for Health and Social Services and the Federal Council. It will be remembered that attempts were made to arrange a conference at the time of the meeting of the Federal Council last March, but that they were unsuccessful—the Minister's freedom from engagements and the availability of the members of the Federal Council could not be made to coincide.

The aspect of the recent meeting which will be of most interest to members of the Branches of the British Medical Association is that which centres round the conference with the Minister. The Minister's letter of May 30, 1947, which is published as part of the report of the recent meeting, explains the reasons for the holding of the conference; but that members may have a full grasp of the situation it is necessary to recall some earlier discussions. It will be remembered (see THE MEDICAL JOURNAL OF AUSTRALIA, December 21, 1946) that the previous Minister for Health, Senator the Honourable J. M. Fraser, wrote in May, 1946, to the President of the Federal Council to inform him that a conference of State Ministers of Health had agreed to appoint two committees which would report on the practical aspects of a national health service. The first committee, that mentioned by the present Minister for Health in his letter of May 30, 1947, was to consist of departmental officers who would consider the practical aspects of the scheme and would try to establish a basis upon matters of policy. The second committee was to determine the following six matters: (*a*) the location of medical centres in the country and in the metropolitan area; (*b*) the type of centre required at each location; (*c*) the types of specialists required at each centre; (*d*) the localities in which flying doctor services or other mobile units were desirable; (*e*) the nature and type of existing and desirable pathological, radiological and specialist services in each town; (*f*) the localities where one-man medical practices should be established. The Minister pointed out that the Government had laid down two major items of policy on which the service should be based. The first was that: "Every person in Australia shall be entitled to medical attention without regard to his economic status and without any direct charge for the service." The second stated that: "This medical service shall include the full range of medical attention, including all modern diagnostic and specialist services." The Minister asked the Federal Council to nominate in each State a representative of the British Medical Association to be a member of the second committee. This was an extraordinary request. Before a "basis upon matters of policy had been determined", the medical profession, through the six Branches of the British Medical Association, were to determine where medical centres were to be established and how they should be composed. The reply of the President of the Federal Council was restrained and dignified. He stated that in the opinion of the Federal Council it would be premature to make the nominations suggested by the Minister. These happenings have to be borne in mind as a background to the events that took place in Melbourne between July 17 and 22, 1947. As stated in our report, no account of the conference with the Minister was made available to this journal. It is admitted that the discussions were informal. This will not affect the reliability of the Minister's declaration that the ultimate aim of the Government is the complete abolition of private practice with the necessary corollary, the control of the medical profession with direction of its members. Many people may say that the Minister let the cat out of the bag; others will probably hold that the general intentions of the Government have never been in doubt. However this may be, the ultimate aim of the Government is clear. The Federal Council admits that the Government has, in the passing of the recent referendum proposals regarding social services, received a mandate to provide a medical service for the people; it is willing to help the Government to create such a service. No one, however, can maintain with any pretence of right thinking that the Government received a mandate to abolish private medical practice and to condemn both the medical profession and the public (the public is in this just as much as the doctors) to complete regimentation and duress. Any doubt that the Federal Council, and through it the whole body of the British Medical Association in Australia, is ready and willing to cooperate with the Government in the establishment of a medical service for the people will be dispelled by perusal of the six principles put before the Minister at the recent conference. It will also be remembered that as long ago as 1944 the Federal Council agreed that a national medical service conducted on the fee-for-service principle might be regarded as "one acceptable substitute for any unacceptable scheme proposed

by the Government" (see THE MEDICAL JOURNAL OF AUSTRALIA, March 11, 1944, page 230). The result of the recent meeting is that the Branches are to be asked whether the profession is prepared in any circumstances to negotiate with the Government on the formation of a service. A prominent member of one of the Branches has expressed the view that "negotiate" is not altogether a suitable word when applied to dealings with a government, as it suggests an element of bargaining. There is something in this view. It is to be hoped that the Branch Councils will back the Federal Council in its endeavours to put its views before the Government and the public. Advice should be given to governments by those best qualified to give it, even though it falls on deaf ears. Whatever happens, it must not be made possible for future generations of medical practitioners to accuse those of the present generation of defeatism and *laissez-faire*.

Two aspects of the discussions on the *Pharmaceutical Benefits Act* call for special mention. The first is for the members of the Branches—that the Federal Council has reaffirmed its decision that members of the Association should be advised not to use the formulary or the prescribed forms. The other aspect is that the public should be made to understand that the British Medical Association in Australia is not opposed to the distribution of "free medicine". What it does object to is the restriction of prescribing within the limits of a formulary or fixed list of drugs and prescriptions if the patient is to receive a free benefit, since this in certain circumstances is calculated to prejudice efficient treatment. The public should also know that under the act the practitioner is hedged round with regulations, many of which appear to him unnecessary and likely to make his work tedious and difficult. If the act provided for the prescription in the customary fashion by the attending doctor of any drug or combination of drugs that the patient might need, the medical profession would see to it that the act was efficiently worked.

The other matters discussed by the Federal Council do not call for special comment. It may be noted with satisfaction, however, that progress is being made with the arrangements for the Australasian Medical Congress (British Medical Association) to be held in Perth next August. A final word to readers of the journal is that the report of the Federal Council meeting in this issue is merely a *résumé* of the discussions and should be read from beginning to end by every Branch member.

Current Comment.

RHEUMATIC FEVER.

REFERENCE was made in these columns on July 19, 1947, to an important series of papers from discussions in New York on rheumatic fever. Three papers bearing on the epidemiology of the disease were reviewed in that issue.

The pathology of rheumatism is discussed in this series by William C. Von Glahn from the department of pathology of the New York University College of Medicine.[1] In a brief historical survey he refers to the Hippocratic description of arthritis which moved from joint to joint, and traces the name "rheumatism" back to a treatise by G. Ballonius published in 1635. The specificity of the submiliary nodule was pointed out in 1904 by Aschoff, whose name it now generally bears. The formation of the nodule is described—collagen swells and fragments, about the fragments there collect small mononuclear cells and occasionally polymorphonuclear leucocytes, and the small cells are gradually but completely replaced by the characteristic large Aschoff cells. The reticulum fibres of the myocardium are spread apart by these cells which gradually become spindle shaped to resemble connective tissue cells; collagen is laid down and finally a dense avascular scar is formed. Von Glahn is of the opinion that an Aschoff nodule heals in a few weeks, and that, when a nodule is found *post mortem* years after the last attack of arthritis, the myocardium has been undergoing repeated damage, rather than that the nodule has persisted since the attack of arthritis. Aschoff nodules are widely distributed throughout the heart and great vessels as well as elsewhere in the body. The characteristic wart-like vegetation of rheumatic endocarditis is described and discussed. Von Glahn emphasizes, however, that the changes that occur within the valve leaflet are more important than the vegetations on the valve edge; repeated attacks of acute interstitial valvulitis are followed by a progressive increase in connective tissue, scarring and often the deposition of calcium. This, rather than the healing of the vegetations, causes the deformity and malfunction of the valves. Similar deforming changes occur in the *chordæ tendineæ*. A characteristic form of endocarditis commonly occurring in the auricular endocardium is described; this results in scarring and calcium plaque formation and may involve adjacent valves. Pericarditis of varying extent occurs with fibrinous exudate and much or little fluid; the pericardial space may be obliterated by granulation tissue. Lesions in the aorta (of which histological details are given) may result in dense avascular scars surrounding the nutrient vessels or in intimal plaques and ridges. In the smaller vessels swelling and proliferation of the endothelium have been noted. Changes occur in arterioles and capillaries which lead to the ultimate narrowing or obliteration of the lumen; such lesions have been observed in the smaller branches of the pulmonary, renal and pancreatic arteries, in the ovary and about the adrenals. A specific lung lesion, rheumatic pneumonia, is described; the affected portions of lung are firm but elastic, and on section the surface of such areas is smooth and deep red. A fibrinous pleurisy is of fairly frequent occurrence even in the absence of rheumatic pneumonia. The subcutaneous nodule consists of successive zones of spindle-shaped cells and mononuclear cells with dilated capillaries and endothelial cells, all grouped around a centre apparently composed of swollen fragmented collagen. These nodules have been reproduced by the subcutaneous injection of blood from the patient followed by rubbing of the area, and occasionally by the same procedure, but with saline solution substituted for blood. Rheumatic peritonitis and nephritis are also described, the latter being an interstitial lesion without glomerular damage. The cavity of an affected joint contains an excess of fluid with a little fibrin and a few polymorphonuclear leucocytes; œdema and hyperæmia of the synovial membrane are present with œdema of the periarticular tissues, focal necroses in the capsule, thrombosis of the smaller arteries and the characteristic cellular accumulation in the periarticular tissues. In the case of chorea the brain shows little but hyperæmia macroscopically; histological changes are found in the grey matter, in the basal ganglia, in the brain stem and in the neighbourhood of the aqueduct. There is a great deal more detail, especially as regards histology, in Von Glahn's article to which the interested reader might well refer.

It is rather refreshing after so much academic discussion to turn to the essentially practical remarks of an experienced clinician. Cary Eggleston,[1] confronted with describing rheumatic heart disease in the adult, declared the task too big and was "content to make a few points that seem to be of reasonable importance".

[1] *The American Journal of Medicine*, January, 1947.

[1] *The American Journal of Medicine*, March, 1947.

His remarks regarding ætiology and sulphonamide prophylaxis are rather ambiguous, but the impression given is that he is a trifle sceptical of current views. The most interesting part of Eggleton's discussion has to do with the assessment of rheumatic activity in the heart, both in initial diagnosis and in the stages of apparent recovery. He pins his faith to clinical rather than to laboratory findings, though he does not minimize the difficulties. Some adults have a single attack without any recurrences. More commonly repeated attacks occur. A mild degree of clinical activity may be present for years, but it is most difficult to diagnose; the growing of cultures from throat swabs does not appear to give a reliable indication. Eggleston stresses the fact that active rheumatic lesions have been found in the heart *post mortem*, although there had been no clinical evidence during life to reveal their presence. Four general categories are suggested for the classification of rheumatic heart disease in the adult. The first is acute rheumatic fever with evidence of carditis, endocarditis, pericarditis—one or more of these combined. The second includes patients with healed valvular lesions, but no evidence of current active rheumatic disease. In the third category are those with active rheumatic disease as well as the signs of former valvular damage. This is the commonest form and the most difficult to treat. It is probably safe to say that "the patient who does not respond to the usual forms of therapy has active rheumatic carditis". The fourth group contains those with superimposed bacterial endocarditis. Commenting on individual cardiac manifestations, he advises delay in assessing valvular and myocardial damage from acute rheumatic disease; the full damage may not be apparent for six or even twelve months. The occurrence of auricular fibrillation is considered to be a manifestation of rheumatic active carditis—this, of course, does not refer to its establishment as a permanent arrhythmia which may persist after the subsidence of active disease. Contrary to the general opinion, Eggleston has found that the prognosis is fairly good in patients with rheumatic pericarditis as the chief manifestation of the disease. He discusses the difficulty of differentiating between the picture of a healed valvular lesion in an active rheumatic heart and early bacterial endocarditis. In many cases the diagnosis depends solely on the growth of organisms from the blood stream, but it is vital that an accurate diagnosis be made, especially in view of recent successes in the treatment of bacterial endocarditis with penicillin. Another diagnostic point relates to the patient with a low-grade temperature, signs in the chest from time to time and failure to respond to the usual therapy directed towards heart failure; this patient may have recurring pulmonary infarction. Eggleston is very cautious in his handling of the convalescent and considers that it is just as important with the adult as with the child to be sure that rheumatic activity has ceased; he advocates more institutions suited to caring for the patient in the stage between the acute illness and quiescence of the rheumatic condition. On the subject of when the patient may be mobilized he comes back to the problem of rheumatic activity and refers it finally to "clinical judgement".

For the sake of the young practitioner who is patiently (or impatiently) developing his clinical judgement, it seems appropriate to consider the value of ancillary aids in assessing rheumatic activity. The radiologist's contribution is discussed by John B. Schwedel,[1] who describes his approach as "that of the clinician trained in the use of this tool rather than that of the roentgenologist with a knowledge of heart disease". He states that there is no typical X-ray picture of rheumatic heart disease, but that useful information about the condition and the site of the lesion may be obtained from the study of the appearances of the various chambers of the heart. He refers to the general acceptance of the importance of pericarditis and of cardiac enlargement in the assessment of rheumatic activity and declares his belief that "progressive cardiac enlargement, or the demonstration of individual cardiac chamber enlargement, when compared with a previous examination even in the absence of congestive failure, is also an indication of rheumatic activity. This is true whether such enlargement is or is not associated with the usual manifestations of congestive heart failure". Various other aspects of the subject are discussed by Schwedel, including the pulmonary manifestations of rheumatic disease as seen at X-ray examination, but he concludes with a strong reminder that radiological findings must be correlated with other parts of a general examination.

A similar balanced attitude is taken by Harold E. B. Pardee in considering the relevant electrocardiographic findings.[1] He denies that the electrocardiogram shows any features characteristic of rheumatic fever alone, but does assert that at times it may provide the only available evidence of rheumatic activity. Its importance is in relation to the appreciation of myocardial function; generally speaking, it does not provide significant information about the remaining cardiac structure. Depending upon the effect on the muscle, we may find premature beats, paroxysmal tachycardia or other rhythm disturbances arising in the auricles, in the auriculo-ventricular node or in the ventricles. Auricular fibrillation and flutter, and prolonged auriculo-ventricular conduction, sometimes progressing to heart block with dropped beats or even to complete heart block, may occur. Bundle branch block is a rare finding. Certain changes in the *QRS* group and *T* wave may occur, such as low voltage of *QRS*, low voltage of *T* and changes in the electrical axis of *QRS*. There may be elevation of the *S-T* junction probably occurring as a result of acute degenerative changes and also diphasic or inverted *T* waves in leads I and II or both. These features usually are found during the active phase of the disease, though they sometimes persist after other signs of activity have gone, even after the sedimentation rate has returned to normal. Occasionally changes in the *T* wave or in the *P-R* interval may persist after the disease has become inactive. It may be that in these cases there is fibrosis, which is interfering with the function of the tissue. Pardee asserts that, if looked for daily, electrocardiographic changes will be found in practically all rheumatic patients and that the persistence of abnormalities, especially in the *T* wave or the conduction time, when the patient has apparently recovered, is sufficient to cast doubt on the apparent state of recovery. There are, however, a small percentage of cases (1% or 2%) in which changes persist due to myocardial fibrosis when all rheumatic activity has subsided.

It will thus be seen that a good deal of assistance in the assessment of rheumatic activity may be obtained from X-ray and electrocardiographic examination, but the final opinion must rest on clinical judgement.

[1] *The American Journal of Medicine*, May, 1947.

OPHTHALMIC LITERATURE.

WITH the ever-increasing volume of medical literature, abstracts are becoming more and more important to the busy practitioner. Reference was made in these columns on April 12, 1947, to two new British Medical Association journals covering abstracts of medicine, surgery, obstetrics and gynæcology. Now the first issue has been received of *Ophthalmic Literature*, a journal issued by The British Journal of Ophthalmology, Limited. The intention is to provide abstracts of ophthalmological papers embracing the world's literature so far as that is possible, to abstract papers in general medicine, surgery and pathology which have an ophthalmological bearing, and also to make reference to the periodical scientific literature dealing with cognate interests. In addition it is proposed to include "periodical reviews" dealing with subjects of growing importance. The journal, which is to be issued quarterly, or more frequently if necessary, is working in association with the abstracting service of the British Medical Association, and with other abstracting journals. The first issue of *Ophthalmic Literature*, that of June, 1947, covers the literature published from January 1, 1947, and includes a review of "Penicillin in Ophthalmology" to which is added a comprehensive list of references.

[1] *The American Journal of Medicine*, May, 1947.

Abstracts from Medical Literature.

BACTERIOLOGY AND IMMUNOLOGY.

Active Immunity to Poliomyelitis.

JOSEPH L. MELNICK AND DOROTHY M. HORSTMANN (*The Journal of Experimental Medicine*, March, 1947) attempted to produce active immunity to poliomyelitis in chimpanzees following subclinical infection. Such studies in rhesus monkeys are handicapped, when immunity is being challenged, by the technical routes of reinfection whether intracerebral inoculation or intranasal instillation of virus. The observation that the larger animal could be infected by feeding and carrier states produced by inoculation of virus into the skin made possible the present approach to the problem of protection against the disease following inapparent infection. Two chimpanzees were prepared by feeding virus contained within bananas for three days. Stools were collected before and for one month after the ingestion of virus, and the prepared inoculum from the specimens was tested for infectivity in mice, cotton rats and monkeys. Virus was recovered twice within the test period from each animal, and five weeks after the test the serum of each animal contained neutralizing antibodies. Three months later one of these animals was given an injection of virus both into and under the skin, and a normal control animal was similarly inoculated. Fæces were again collected, and while the control animal showed presence of virus in his intestine after subcutaneous inoculation of virus, and also developed neutralizing antibodies in his serum, the previously infected animal did not manifest any reaction or illness, or intestinal virus, presumably as a result of the continued presence of antibodies in his serum. Further experiments with heterologous strains of virus gave varying results. One animal whose serum had developed a broad antibody response and protected mice against a heterologous strain, was immune to infection with that strain; another animal who had not given any virus immunity was reinfected twice with different strains of virus. The authors discuss their results and suggest that the technique presents a more delicate approach to the manifestation of immunity than the customary one of challenge by intracerebral inoculation.

Curative Dose of Penicillin in Experimental Syphilis, and the Feasibility of Prophylactic Use.

HARRY EAGLE, H. J. MAGNUSON AND RALPH FLEISCHMAN (*The Journal of Experimental Medicine*, April, 1947) have studied the relation of the size of the inoculum and the age of the infection to the curative dose of penicillin in experimental syphilis, with particular reference to the feasibility of its prophylactic use. When rabbits are inoculated with *Spirochæta pallida* in varying numbers, there is a corresponding variation in the amount of penicillin necessary to abort the infection when administered four days after inoculation. If 200,000 spirochætes are given by inoculation, the dose of penicillin required to prevent a lesion is 8000 units per kilogram of rabbit; if only 20 organisms are contained in the test dose, 500 units per kilogram are sufficient. A similar difference can be observed if the dose is kept constant, but the time of treatment varies—the longer the interval, the larger the dose that is necessary, until a time is reached when a lesion has developed and the dose of penicillin becomes a curative rather than an inhibitory one. At the latter stage results are not nearly so constant. The authors discuss the use of these facts in the assay of antisyphilitic drugs, especially when used during the incubation period, and also the possibility of prophylaxis in man by which a small dose might successfully abort an infection when the introduced organisms have not begun to multiply freely in the host's tissues.

Action of Streptomycin on Hæmophilus Influenzæ.

HATTIE E. ALEXANDER AND GRACE LEIDY (*The Journal of Experimental Medicine*, April, 1947) have studied the mode of action of streptomycin on type B *Hæmophilus influenzæ*. The failure of the antibiotic to effect a cure in four out of fourteen cases of influenzal meningitis occasioned the investigation, which was carried out on the cultures grown from all the patients. The strains isolated from all patients before treatment were completely inhibited from growing by a concentration of one to seven units per millilitre of streptomycin, but later cultures, isolated from patients after treatment, grew luxuriantly in concentrations as high as 1000 units per millilitre. Investigation of the original cultures showed that, when very large inocula were seeded onto solid media containing the antibiotic in a concentration inhibitory to the primary culture, a very small number of colonies grew out, indicating that these resistant organisms were present at the beginning, and emerged as dominants only after the sensitive organisms had been dealt with by the therapeutic doses of the drug. The proportion of these resistant members in the original culture did not seem to bear any definite relation to the response to streptomycin treatment, but rather to the abundance of the bacterial population. In the nasopharynx of one cured patient, strains of *Hæmophilus influenzæ*, resistant to 1000 units of streptomycin per millilitre in culture medium, could be isolated over a period of one year.

Immunity to Anthrax.

G. P. GLADSTONE (*The British Journal of Experimental Pathology*, December, 1946) has investigated protective antigen present in cell-free *Bacillus anthracis* culture filtrates. The cultures used were grown in plasma or serum of various animals under carefully defined conditions. An antigen could thus be obtained having similar properties to that present in œdema fluid from experimental anthrax lesions, and injection of three doses of this was sufficient to protect rabbits, sheep and monkeys from 100 lethal doses of living anthrax spores. Two factors in the plasma are apparently concerned, one dialysable and replaceable by sodium carbonate, the other associated with serum proteins. No constant association between the antigen and condition of the organism, such as virulence, presence of capsules or number of spores, could be detected. Serum from animals immunized with the antigen contained no protective antibodies for susceptible animals against challenge doses of the organisms, and subsequent vaccination with living virulent bacilli produced effective protective serum. No complement fixation or precipitation reactions were obtained with hyperimmune serum. The antigen in the cell-free filtrate appeared to correspond with the œdema fluid preparations of French workers.

Rodenticides.

JOHN T. EMLEN, JUNIOR, AND ALLEN W. STOKES (*The American Journal of Hygiene*, March, 1947) have studied the effectiveness of various rodenticides on populations of brown rats in Baltimore, Maryland. Seven poisons were tested on groups of 25 rats penned in a circular metal indoor cage ten feet in diameter, the substance being introduced with finely ground corn. Five substances gave "kills" of 75% to 100% in five days; the bait containing strychnine was not accepted well by the animals and so gave a poor result; and one substance was of low toxicity. Field tests were then instituted in city block areas, a careful census being made of the rat holes, runways *et cetera* before and after baiting was carried out. The most effective of the five poisons was ANTU (α-naphthylthiourea) in combination with several baits, this producing a diminution of 82% in the total rat population, while the control area showed an increase of 7%. ANTU was believed to be a relatively safe substance to use in field work involving free living populations of animals in cities.

Relationships Amongst Polysaccharides.

JOSE OLIVER-GONZALEZ (*The Journal of Infectious Diseases*, November-December, 1946) has studied immunological relationships among polysaccharides from various infectious organisms. The fractions tested were obtained from helminthic and bacterial parasites of animals and man. Antiserum was produced in rabbits and this was tested against the purified polysaccharides and against extracts from the whole worm parasites, and a great deal of cross reaction was found to exist between antigens from *Ascaris lumbricoides*, *Trichinella spiralis*, *Fasciola hepatica* and *Tænia saginata*. The polysaccharides of these antigens inhibited the iso-agglutinins α_1 and α_2 of human serum, as did the polysaccharide of Types I and III pneumococci. The author suggested that the polysaccharides isolated from some helminths contain more than one antigen, the iso-agglutinogen-like substance being qualitatively different from the precipitinogen.

End Points in Serological Titrimetry.

CARL-GÖRAN HEDÉN (*The Journal of Pathology and Bacteriology*, July, 1946) has developed a formula in the estimation of 50% end points in serological titrimetry. He draws attention to the chance error which enters into the practice of naming a single dilution of serum as the critical one, in a serial dilution method of testing agglutinins and precipitins in immunological work; and contrasts its accuracy with the so-called 50% end point employed in the testing of therapeutic and toxic substances on groups of animals. A mathematical formula was developed, use being made of the degree of

reaction shown in the four last tubes in which change had taken place, and a simple table was constructed from which the titre corresponding to a 50% end point could be calculated.

HYGIENE.

Treatment and Prophylaxis of Diphtheria.

FRANKLIN H. TOP (*The American Journal of Public Health*, May, 1947) states that a rise in the incidence of diphtheria in areas where this disease is indigenous has directed attention to treatment and prophylaxis. Five clinical types are described, namely, nasal, tonsillar, pharyngeal, naso-pharyngeal and laryngeal. Antitoxin remains the most important therapeutic weapon and prognosis depends on the day of the disease on which antitoxin is first given. The amount is still debatable; 4000 units are sufficient to neutralize the free toxin in the body at any given moment. In Europe in 1946 the total amount varied from 2000 to 250,000 units of anti-diphtheria serum. In general 60,000 units should be enough. In severe cases half of the dose should be given intravenously following a skin test for sensitivity. Penicillin has a bacteriostatic effect *in vitro*, but is of no value in neutralizing toxin. If complications due to secondary invaders occur or if the infection is a mixed one, 50,000 Oxford units of penicillin should be given followed by 30,000 Oxford units every three hours. All patients except those with naso-pharyngeal and laryngeal forms can be removed from isolation at the end of ten to fourteen days if nose and throat swabs reveal no diphtheritic organisms. Patients with naso-pharyngeal infections should remain in hospital for at least forty-two days and longer if severe complications such as myocarditis and nerve palsies occur. These complications usually appear between the fifteenth and thirty-fifth days of convalescence. In prophylaxis toxin-antitoxin, plain toxoid and alum-precipitated toxoid have been used. Two doses, each of 0·5 millilitre of alum-precipitated toxoid at intervals of four to six weeks, are recommended for children. Older children and adults should undergo skin tests (by the Maloney test) for sensitivity to toxin. All infants should be inoculated between the ages of nine months and one year. If a Schick test yields a positive result six months later, a further dose of toxoid should be given. A "booster" dose should be given before the child commences school. The toxoid should be injected subcutaneously or intramuscularly in the deltoid region. Other methods—intradermal injection and intranasal instillation—have been used with reported good results, but require further study.

Byssinosis in the Cotton Trade.

C. I. C. GILL (*The British Journal of Industrial Medicine*, January, 1947) states that byssinosis (from a Greek word meaning "fine linen") is a respiratory disease affecting workers inhaling dust in cotton mills. Cotton from Egypt, America and India arrives in bales mixed with particles of leaf and seed coat, cotton hairs, fragments of mould and fine sand. In the cotton chamber and blowing rooms the bales are opened and the cotton is fed into machines which free it from a large percentage of its impurities. Here the operatives should wear respirators and protective clothing and the machines should be covered with dust-proof covers when working. The cotton then passes to the carding rooms where the remainder of the impurities are removed. The dust liberated by the carding process appears to contain the substance causing byssinosis in the operatives in charge of the carding machines. In the early stages of the disease the card-room operatives complain of a dry irritating feeling in the throat and chest followed by a short dry cough and attacks of sneezing, with sore eyes, a mild conjunctivitis and a slight pyrexia; occasionally an urticarial rash appears on the arms. These symptoms usually appear after an absence for a few days from the carding rooms and they disappear after a few hours. This suggests an allergic sensitivity to some constituent in the dust. Ten to twenty years later attacks of bronchitis become more frequent; chronic cough, dyspnœa, easily induced fatigue, loss of sleep due to asthma-like nocturnal attacks become the main symptoms in a middle-aged man condemned to chronic invalidism. A thickened, hyperæmic naso-pharyngeal mucous membrane may be the only sign in the early stages. In the later stages the signs are those of chronic bronchitis and emphysema. The vital capacity of the chest is greatly reduced. The radiographic appearances are those of chronic bronchitis and emphysema with increased bronchial shadows. Diagnosis rests on a history of exposure to cotton dust for many years. Post-mortem findings are those of chronic bronchitis and emphysema. The causative substance is probably in the form of ultramicroscopic particles of a soluble protein which reaches the deepest parts of the lungs and penetrates the alveolar tissue; it produces thickening of the alveolar walls and hypersensitivity. The irritation of the bronchial mucous membrane causes a chronic bronchitis accompanied by a cough, expectoration and, ultimately, emphysema. This disease can be prevented by better mechanical means to prevent the dust from the carding machines from reaching the atmosphere, greater air space per person, better air-conditioning, better dust extraction and greater air space per machine. Workers in the carding rooms should be medically examined regularly and all workers should be medically examined before commencing work in the card rooms. Those with a history of allergic reactions, those with nasal and naso-pharyngeal abnormalities and mouth-breathers should be excluded from the card rooms. All operatives should wear protective respirators and breathe through the nose.

Community-Wide Chest X-Ray Surveys.

FRANCIS J. WEBER (*Public Health Reports*, May 2, 1947) states that the United States Public Health Service has four main objects as regards tuberculosis control, namely: (i) the discovery of every person infected with tuberculosis, (ii) isolation and medical care for every person needing treatment, (iii) after-care and rehabilitation, and (iv) protection of the afflicted family against economic distress. To protect the community and ensure a good prognosis for the infected individual the disease must be detected in the early stages in the presumably healthy person. This is easily achieved by community-wide photofluorographic surveys. A survey should be completed in two to five years and infection spreading cases isolated, in order to bring about an effective reduction in the disease hazard for the remaining population. The majority of cases are found in the group of those fifteen years and older. Time and expense are saved by surveying this group only. The organization and conduct of a survey require good planning by State and local health departments and other official welfare, vocational and rehabilitation departments, by voluntary associations and by the medical profession. A rural community will take longer than an urban community. Many survey units can expose and develop 500 films a day, but 300 may be accepted as a good daily average. The aim of any survey should be to leave the community with the majority of active cases of tuberculosis either under treatment or with the preliminary arrangements made for their treatment. In conducting a survey the ordinary publicity media—radio, newspapers, pulpit and school announcements—may suffice to bring people out to the survey, but in addition it may be necessary to conduct a house-to-house canvass. For victory over tuberculosis, as in a military campaign, we must plan and execute each attack with organization, training, equipment and financial support.

The Negative Result to the Tuberculin Test.

B. COUTS (*The British Journal of Tuberculosis and Diseases of the Chest*, April, 1947) states that in theory all persons infected with tuberculosis yield positive results to the tuberculin test and all uninfected yield negative results. Many subjects of clinical tuberculosis have yielded negative results with 0·1 milligramme of old tuberculin, but it has been found that almost all of these would react if higher doses of tuberculin were used, namely, one milligramme, ten milligrammes or even one hundred milligrammes. A small number, usually not more than 2% of subjects, often those with meningeal or miliary phthisis, or those who were moribund, did not react to these larger doses. If these are remembered, a clear negative result to the tuberculin test with adequate dosage is a very strong indication of the absence of clinical tuberculosis. It is stated that four to seven weeks elapse after infection before the development of skin allergy. Therefore in suspicious cases in young people it may be useful to repeat the test after an interval of a few weeks. It is possible by injecting a number of large doses of tuberculin to desensitize the skin to tuberculin. The usual doses in man, however, tend to increase the reaction to subsequent injections of tuberculin. Owing to the original stimulus, to the presence of living tuberculosis bacilli, or to repeated "booster" reinfections, positive results to the test were thought to last throughout the life of the individual. A very small proportion, however, becomes "negative", presumably with the healing of slight usually primary infections. A larger proportion becomes "negative" in old age possibly for the same reason. In areas where the incidence of tuberculosis is of a low order the tuberculin test can be used in case-finding campaigns.

British Medical Association News.

MEETING OF THE FEDERAL COUNCIL.

A MEETING of the Federal Council of the British Medical Association in Australia was held at the Medical Society Hall, Albert Street, East Melbourne, on July 17, 18, 19 and 22, 1947, SIR HENRY NEWLAND, the President, in the chair.

Representatives.

The following representatives of the Branches were present:

New South Wales: Dr. W. F. Simmons, Dr. H. R. R. Grieve, Dr. A. J. Collins, M.C., D.S.O., Dr. A. J. Murray.

Queensland: Dr. A. E. Lee, Dr. H. W. Horn.

South Australia: Sir Henry Newland, C.B.E., D.S.O., Dr. R. J. Verco.

Tasmania: Dr. C. Craig, Dr. T. Giblin.

Victoria: Dr. F. L. Davies, Dr. T. E. Victor Hurley, C.B., C.M.G., V.D., Dr. H. C. Colville.

Western Australia: Dr. F. W. Carter, Dr. N. M. Cuthbert.

Minutes.

The minutes of the meeting of the Federal Council of March 3, 4 and 5, 1947, which had been circulated amongst members, were taken as read and signed as correct.

Annual Report of the Federal Council.

The annual report of the Federal Council for the year ended June 30, 1947, which had been circulated amongst members, was adopted.

Finance.

Dr. W. F. Simmons presented the financial statement and balance sheet as at June 30, 1947. The statement, which included the Federal Council account and the Australasian Medical Congress (British Medical Association) Fund account, was received and adopted.

A discussion took place on the capitation payments of Branches to the Federal Council, and the question of uniformity of procedure by the Branches in connexion with the *per capita* payment was raised. It was pointed out that certain members paid full rates of Branch subscriptions, that others who had permanently retired from practice paid smaller amounts, and that other variations existed. It was resolved that a *per capita* payment should be made to the Federal Council for every member of a Branch from whom a subscription was received.

In regard to the capitation rate for 1948, the Treasurer, Dr. W. F. Simmons, gave an estimate of what he thought the expenses of the Federal Council would be. He referred to payments that would have to be made to the World Medical Association and to expenses in connexion with certain other gatherings overseas. It was resolved that the *per capita* payment from the Branches should be 12s. 6d. Later on in the meeting, after a conference had been held with the Minister and the session of congress to be held at Perth had been discussed, the subject of the *per capita* payment was reopened, as the Treasurer thought that a payment of 12s. 6d. would not be sufficient. After discussion, in which other amounts were mentioned, it was finally resolved that the *per capita* payment for 1948 should be 15s.

The General Secretary raised the question of the payment of grants to smaller Branches for organization purposes. This matter had been discussed at a previous meeting of the Federal Council, when it was pointed out that the Western Australian Branch, on account of the smallness of its membership, was in financial difficulties as a result of steps that had been taken in connexion with the organization of the profession. Dr. W. F. Simmons asked for a direction from the Federal Council as to what expenditure should be regarded as suitable for inclusion under the heading of organization expenses. Dr. F. W. Carter said that the phrase could be applied only to matters which had a nation-wide bearing on the welfare of the profession. Dr. N. M. Cuthbert supported this view, and the Federal Council agreed that a grant of £200 should be made to the Western Australian Branch for the year 1947. It also agreed that the grant should be paid from the organization fund.

Medical Officers' Relief Fund (Federal).

Dr. W. F. Simmons presented the report of the trustees of the Medical Officers' Relief Fund (Federal) for the year ended June 30, 1947. He pointed out that the trustees were still giving assistance to five medical officers and to the estate of another. He emphasized the fact that this help was still necessary after the long interval that had lapsed since the termination of the 1914-1918 war. Dr. Simmons said that one of the most pleasing incidents that had occurred during the twelve months was the receipt of a gift of £125 from the Returned Medical Officers' Association of Victoria. He thought that this should be widely known. The report was received.

Federal Medical War Relief Fund.

Dr. W. F. Simmons, on behalf of the trustees of the Federal Medical War Relief Fund, presented a report covering the period March 12, 1946, to June 30, 1947. He explained that the amount of the fund stood at £19,349. Of this amount £10,313 had been contributed by the New South Wales Branch, £4194 by the Victorian Branch, £1619 by the South Australian Branch, £1284 by the Queensland Branch, £1119 by the Tasmanian Branch and £425 by the Western Australian Branch. Up to the time of the meeting one request for financial assistance had been received, and arrangements were being made for the granting of a loan. The President asked whether people who might be entitled to financial assistance from the fund knew that the fund existed. Dr. F. W. Carter said that he thought that grants should be given wherever possible in place of loans, and Dr. H. R. R. Grieve drew attention to the low expense rate. Dr. Grieve thought that possibly the existence of the fund was not known as widely as it should be known. Dr. W. F. Simmons explained that the trustees in the several States were well aware of those who might need help, and they took care to let these persons know that the fund was available. The report was received.

Decorations Received by Medical Officers of the Armed Forces.

The General Secretary reported that on behalf of the President and members of the Federal Council he had offered congratulations to the following members of the Australian armed forces who had been honoured by His Majesty the King: Dr. W. P. MacCallum, C.B.E., Dr. G. B. G. Maitland, C.B.E., Dr. E. L. Corlette, O.B.E., Dr. D. J. Brennan, O.B.E., Dr. C. B. Sangster, O.B.E., Dr. N. H. Morgan, O.B.E., Dr. I. W. MacNaught, M.B.E., Dr. L. G. Travers, M.B.E., Dr. C. C. Wark, M.B.E., Dr. B. W. Nairn, M.B.E., Dr. D. C. Pope, M.C., Dr. C. W. B. Littlejohn, C.B.E., Dr. W. A. Bye, O.B.E., Dr. A. A. Moon, O.B.E., Dr. R. L. Cahill, O.B.E., Dr. E. E. Dunlop, O.B.E., Dr. A. K. Jones, M.B.E., Dr. E. Murray-Will, M.B.E., Dr. H. V. Francis, M.B.E., Dr. B. A. Hunt, M.B.E., Dr. T. Godlee, M.B.E.

Honours.

The General Secretary reported that on behalf of the President and members of the Federal Council he had offered congratulations to Dr. A. R. Southwood, C.M.G., E.D., on his inclusion in the 1947 New Year's Honours list, and to Sir Thomas Meagher, Kt., on his inclusion in the 1947 Birthday Honours list.

A Request for Approval of a Hearing Aid.

The General Secretary read a letter from a commercial firm asking the Federal Council's approval of a hearing aid and portable hearing equipment. He said that he had replied to the firm that it was not the Council's custom to give testimonials for commercial preparations. The Secretary's action was approved.

A Quorum of the Federal Council.

At the meeting of the Federal Council in March, 1947, Dr. A. E. Lee gave notice of a motion regarding the quorum of the Federal Council. In moving his motion Dr. Lee explained that he thought some alteration was called for in view of the increase in the number of representatives. The motion, which was seconded by Dr. H. W. Horn and carried, was as follows:

> That By-Law 4 of the Federal Council be amended to read:
>
> "Until otherwise determined by the By-Laws, six members present in person at any meeting of the Federal Council shall be a quorum provided that such six persons be members of four Branches. Two members representing one or more States present in person at any meeting of the Executive Committee shall be a quorum. The quorum for any other Committee shall be determined by the Federal Council or by the By-Laws, but if not so determined then in any such case it may be fixed by the Committee. If no quorum shall have been appointed

two members of any such Committee shall form a quorum.

"If within half an hour from the time appointed for a meeting of the Federal Council a quorum be not present, the meeting shall stand adjourned until a day and hour to be determined by the members present, or, failing such determination, by the Secretary, and if at such adjourned meeting a quorum be not present, those present shall be deemed a quorum provided they represent two branches."

Australasian Medical Congress (British Medical Association).

Reference was made to the sixth session of the Australasian Medical Congress (British Medical Association) to be held at Perth from August 15 to 21, 1948. The General Secretary pointed out that the patron of congress had to be appointed by the Federal Council. On the nomination of the Executive Committee of congress it was resolved that the Governor of Western Australia should be invited to accept the position of patron of the sixth session.

The General Secretary pointed out that according to regulation 9 of the regulations of the Australasian Medical Congress (British Medical Association), the vice-presidents of congress to be appointed by the Federal Council should include past presidents of congress, any vice-president of the British Medical Association who was a member of a Branch of the British Medical Association in Australasia, the Director-General of Government Medical Services, the Director-General of Army Medical Services and the Director-General of Health of the Commonwealth of Australia, the Director-General of Army Medical Services and the Director-General of Health of the Dominion of New Zealand, a representative of each Branch of the British Medical Association in Australia and New Zealand chosen by the Council of the Branch, and the president for the time being of the Federal Council and all ex-chairmen of the Federal Committee of the British Medical Association in Australia. It was resolved that to this list should be added the Director-General of Medical Services, Royal Australian Air Force.

The General Secretary said that invitations to accept the position of vice-president had been issued to the persons named in regulation 9. He reported that the New South Wales Branch had nominated Sir Charles Blackburn as vice-president, the Tasmanian Branch had nominated Dr. Wilfred W. Giblin, the Victorian Branch had nominated Dr. F. Kingsley Norris, and the South Australian Branch Dr. H. M. Jay.

The General Secretary reported that Dr. H. M. Trethowan had been appointed Honorary General Secretary of the session, Dr. H. Macmillan had been appointed Honorary Treasurer, and Dr. G. B. Maitland and Dr. Cyril Fortune Assistant Honorary Secretaries.

The Executive Committee of congress submitted a list of persons who in its opinion should be appointed honorary members of congress. The list was approved.

The Executive Committee sought permission from the Federal Council to increase the congress subscription from £2 2s. to £3 3s. The increase was approved.

An advance of £500 was made by the Federal Council from congress funds for the use of the Executive Committee. The amount was regarded as an interim payment.

At the request of the Executive Committee of congress, the Parent Body of the Association in England was invited to nominate a representative.

A letter was received from the Executive Committee of congress, stating that it was thought that the University of Western Australia might confer honorary degrees on one or more of the leaders of the profession who were attending congress. This was noted with satisfaction and the principle was approved.

The General Secretary reported that the Executive Committee of congress had advised kindred associations of the date of congress in order to preclude the possibility of their holding meetings that would clash with the session. The list of associations mentioned was read and approved.

Australasian Medical Publishing Company, Limited.

The General Secretary reported that the Australasian Medical Publishing Company, Limited, had at the request of the Federal Council published a list of members of the several Branches as at March 31, 1947.

Publicity.

Dr. W. F. Simmons, Dr. A. J. Collins, Dr. H. R. R. Grieve and Dr. A. J. Murray were appointed members of the Publicity Committee. Some discussion took place on the making of statements for public use. It was pointed out that sometimes a matter was urgent, and it was not always possible to call a meeting of the Publicity Committee. It was resolved that it should be a recommendation to the Branches that when in the opinion of a Branch a need had arisen for the publication of the Association's views on a matter affecting the profession as a whole, the Branch should communicate by telegram or telephone with the General Secretary, expressing its views. The word "recommendation" was used in this resolution to meet the wishes of Dr. F. L. Davies, who held that the Federal Council's views on this matter should not be too binding.

Organization of the Profession.

The General Secretary gave a short report on his visit to Tasmania from March 21 to 24, when he addressed meetings at several centres. The report was received.

A Handbook for Qualified Medical Practitioners.

A communication was received from the Western Australian Branch, suggesting that the Federal Council should publish a handbook for the use of recently qualified medical practitioners. It was pointed out that the Queensland Branch had a handbook, and that it was issued to new graduates, and the New South Wales Branch also had a handbook. The opinion was expressed that a handbook to cover all the States would probably be a fairly large work. It was resolved that the question of the publication of a handbook by the Federal Council should be referred to the General Secretary and to the Australasian Medical Publishing Company, Limited, for an estimate of the cost.

The Ophthalmological Society of Australia (British Medical Association).

The General Secretary said that he had received a communication from the Ophthalmological Society of Australia (British Medical Association) to the effect that its seventh annual meeting would be held in Sydney from September 23 to 26, 1947, and that it wished New Zealand ophthalmologists to be invited to attend. An invitation had been sent to New Zealand.

Pharmaceutical Benefits Act.

The General Secretary explained that after the last meeting of the Federal Council in March, 1947, the President had received an invitation from the Minister for Health and Social Services, Senator N. E. McKenna, agreeing to a suggestion that a conference might be held between the Minister and the Federal Council. The President's suggestion was made because at the time of the Federal Council's meeting in March, 1947, a conference that was proposed between the Minister and the Federal Council could not be held because no suitable date could be found. It would be remembered that at its March meeting the Federal Council discussed the possibility that the Government might issue to patients, free of charge, certain expensive drugs and medicaments, such as penicillin, the sulphonamides, antiserum, insulin and so on, if the prescriptions were written by the attendant medical practitioner on his own prescription forms. The Minister's letter bore the date of March 29, 1947. The General Secretary explained that a conference had been held on April 21, 1947, between the Minister and representatives of the Federal Council—the President, Dr. Victor Hurley, Dr. F. W. Carter, Dr. A. J. Collins, Dr. H. R. R. Grieve and the General Secretary. The General Secretary said that the conference was purely informal, and reference was made particularly to the type of drugs which the Federal Council at its March meeting thought might be issued free of charge. After the conference the representatives of the Federal Council met to discuss what action should be taken in regard to the request of the Minister for advice on the following three points: (*a*) the deficiencies of the Commonwealth Pharmaceutical Formulary, (*b*) amplification of the Council's list of suggested free drugs and preparations, and (*c*) what constituted an "examination" for the purposes of the penal clause. Dr. A. J. Collins and Dr. F. W. Carter were appointed a subcommittee to examine the Commonwealth Pharmaceutical Formulary with the right to consult and to submit a report to the committee. Dr. A. J. Collins and Dr. F. W. Carter were also appointed to examine the list of free drugs and preparations with a view to its amplification. It was also resolved by the committee that in the following circumstances a medical practitioner would be carrying out an examination for the purpose of prescribing pharmaceutical benefits: (*a*) during the ordinary examination of a patient in person; (*b*) during the ordering of a repeat mixture for a patient who did not attend in person, but who had been previously examined by the medical practitioner and of whose

physical condition the practitioner was fully aware; (*c*) during the prescribing for a patient, who, although able to communicate his symptoms, was unable because of distance to attend the practitioner in person; (*d*) during prescribing in an emergency provided that an examination was carried out later.

The General Secretary said that on May 29, 1947, he had written to the Minister and had sent him: (*a*) comments on the Commonwealth Pharmaceutical Formulary; (*b*) the list of drugs and preparations which the Council suggested should be provided free on the prescription of a medical practitioner, written on the usual prescription form; (*c*) the opinion of the Council regarding the circumstances in which it would be permissible for a medical practitioner to prescribe pharmaceutical benefits under the act.

The General Secretary said that the Minister, in his reply, commented on the views expressed by the Council regarding the Commonwealth Pharmaceutical Formulary, and said that the list of drugs and preparations which the Council suggested should be provided free, did not contain drugs commonly used in the treatment of many maladies of widespread nature, and that as there were numerous other matters arising from a consideration of the list of drugs submitted by the Council, he was of the opinion that the most expeditious method of disposing of the matter would be to set up a committee of experts to elaborate and examine all the proposals. He would, therefore, suggest that the Council might nominate three members, preferably including a pharmacologist, to confer with three officers, including the Director-General of Health as chairman, nominated by his department.

The General Secretary pointed out that the *Pharmaceutical Benefits Act* had been passed by both Houses of Parliament and was on the statute book. He added that he had asked the Branch councils for their views on the Federal Council's proposal that "free" drugs should be limited to those which were costly, life-saving and disease-preventing and which drugs and preparations should be included. The South Australian Branch supported the decisions of the Federal Council at its March meeting. The New South Wales Branch was prepared to leave the matter to an expert committee of the Federal Council. The Queensland Branch was in favour of the Federal Council's view regarding costly and life-saving drugs. The Victorian Branch thought that the only thing which remained was to reaffirm the Federal Council's view on the whole act. Dr. A. E. Lee said that the Council's non-cooperation was the Association's policy. He said that no consideration should be undertaken without the supply of new facts. He did not think that it was right to ask the Branches any questions about costly drugs. To do this was to ask the Branches to reconsider the whole policy. When a Branch said that it was in favour of a certain list of drugs which were to be supplied free, what became of the Federal Council's policy? What should have happened was that the Federal Council should have asked the Branches whether they wished the policy to be reconsidered. Dr. F. L. Davies thought that Dr. Lee was under a misapprehension. If certain drugs were to be supplied free this did not constitute the drawing up of a formulary. Dr. H. C. Colville thought that Dr. Lee had failed to grasp matters. The act had been passed and it was only necessary to read what had happened to see that everything suggested by the Federal Council had been ignored. In no single respect had the judgement of the doctor been compounded. Dr. Victor Hurley agreed with Dr. Colville. Dr. A. J. Collins thought that Dr. Lee put up difficulties which did not exist. Dr. H. C. Colville referred to the four main objections of the Federal Council to the act which had been stated at the meeting of the Federal Council in September, 1944 (see THE MEDICAL JOURNAL OF AUSTRALIA, October 28, 1944, page 467). It seemed to Dr. Colville that unless the Federal Council displayed a lack of logic its only course was to reaffirm the policy already stated. Dr. Colville submitted that there was no necessity to drag the doctors into this business. There was no need for the members of the medical profession to be concerned at all. If doctors did nothing about it, but merely went on using their own prescription forms, the Government would have to find someone else to do its clerical work for it.

Dr. Colville therefore moved that the Federal Council reaffirmed its resolution in regard to the *Pharmaceutical Benefits Act*, namely, that members of the Association should be informed of the nature of the objections of the Federal Council to the act and should also be advised not to use the formulary or the prescribed forms.

Dr. F. W. Carter seconded the motion. He expressed the disappointment that he had felt after the last meeting with the Minister; he had thought that at last there was a Minister for Health who could understand and sympathize with the Federal Council's point of view. The Minister had carefully disregarded what the Federal Council put up to him; in fact, he did not give straightforward answers to the Federal Council's representations. It was important to realize that what the Federal Council had put up to the Minister was an attempt on its part to be of use to the community. At least the Federal Council might expect an answer from the Minister whether he was in favour of the Federal Council's ideas or not.

Dr. H. R. R. Grieve supported Dr. Colville. He thought that the Federal Council should accept Dr. Colville's motion. Dr. A. J. Collins agreed with the motion; he too had been disappointed in the Minister's attitude. He thought that the time had come to get to grips and for the Federal Council to tell the Minister just where it stood, to give him its opinions. The Minister had ignored the Federal Council's advice; Dr. Collins thought there was too much talk and held that it was time for the Federal Council to say "No". Dr. N. M. Cuthbert said that he had been instructed by his Branch to put forward the question of administration. He thought that in any reply to the Minister the question of administration should be mentioned. Dr. F. L. Davies said that the Government wanted doctors to act as its costing clerks. As the *Pharmaceutical Benefits Act* had become law and the Government had taken no notice of the Federal Council's suggestions, he thought that the Federal Council should cease negotiations. Dr. Victor Hurley said that by the recent referendum the Federal Government had acquired power to give free medicine to the people, but not to drag in the medical profession to do the Government's work at the risk of penalties. It appeared that the Government wanted to keep down the cost and put the onus of this on to the doctor. Dr. Hurley saw no reason why the doctors should put out their necks to incur penalties. The President said that he thought that the Federal Council could do nothing else but support Dr. Colville's motion. Dr. T. Giblin said that in no circumstances should the Federal Council put members of the profession in such a position that the public would not understand their actions. Dr. A. E. Lee agreed that the question of costing was the reason for the limitation of the formulary. Dr. H. W. Horn said that the Queensland Branch believed that the implementation of the *Pharmaceutical Benefits Act* would be the first step in the introduction of a nationalized health service.

Dr. H. C. Colville's motion was put to the meeting and carried.

The Federal Council then resolved that a letter should be sent to the Minister and also that a statement should be drawn up for the general public.

In the letter to the Minister the four principal grounds for the Federal Council's objection to the act were restated as follows: (i) The principle of discrimination, as to their entitlement to pharmaceutical benefits, between those members of the public whose requirements come within the limits of the formulary and those whose requirements are not so covered. It is this principle which involves an interference with the doctor's freedom of judgement in prescribing for his patient. (ii) The principle of penal clauses, whereby a doctor who voluntarily uses the government forms and formulary finds himself not only restricted in his choice of the treatment which he may order for his patient, and subject to the intervention of a third party in the transaction, but also finds himself liable to heavy penalties if his procedure varies from that laid down by the Government. (iii) The principle of control by a government department rather than by a corporate body. (iv) The opportunity provided for the introduction of a nationalized medical service by means of an act not drawn up for that purpose.

The Minister was then informed that it was with great disappointment that the Council found that the objectionable principles involved had been reintroduced into the *Pharmaceutical Benefits Act*, 1947. The Council therefore wished to inform the Minister that in the circumstances it could not advise the members of the profession in Australia to use the government prescription forms and formulary. The Council went on to state that it wished to reiterate emphatically that it had no desire to deprive the public of the benefit of free medicine which the Government had seen fit to offer. It suggested that this object might still be achieved to the satisfaction of all concerned by government action on one of the following lines: (*a*) that the Government should amend the act so as to remove the four principles objected to by the Council; (*b*) that the Government should regard a doctor's prescription written on his own private prescription form as entitling the patient to receive pharmaceutical benefits. By this means members of the medical profession would not be involved in the machinery of the act which would then concern only the Government, the public and the pharmacists.

The statement to be issued to the public was left in the hands of the Publicity Committee.

The Federal Council also considered a request by the Minister that three members should be appointed to a committee to consider questions associated with the formulary. The Council resolved that the question of appointment of three members to this committee should be deferred pending the receipt of the Minister's reply to the Federal Council's letter.

Medical Planning.

A National Medical Service.

Reference was made to the conference which was to be held on Monday, July 21, with the Minister for Health and Social Services. The President read the following letter which he had received from the Minister:

COMMONWEALTH OF AUSTRALIA.

Minister for Health and
Minister for Social Services.
30th May, 1947.

Dear Sir Henry,

On the 18th July, 1946, you wrote to me stating: "I trust that you will invite the Federal Council of the British Medical Association to confer with you on the plans you have in view for a national medical scheme." In my reply on the 25th July, 1946, I informed you that "I shall be happy at an opportune time to confer with your Council on plans the Government may have in mind for a national scheme".

You will recall that at the Conference of Ministers for health under the chairmanship of Senator Fraser, held on the 6th May, 1946, a Committee of Officers was established under the chairmanship of the Director-General of Health to report upon the practical aspects of a National Medical Service. This committee met in Sydney on the 3rd and 4th February, 1947, and issued a report in the form of a series of resolutions. Some of these resolutions dealt with the varying fields of activity of the Commonwealth and State Governments, whilst others concerned themselves with details of a National Medical Service.

On the 19th and 20th May, 1947, I met the State Ministers for Health in Melbourne and discussed with them the relationship between the Commonwealth and State Governments in the planning of a National Medical Service. The respective responsibilities of the Commonwealth and the States were clearly defined and I am now ready to consider the details of such a service.

I attach for your information a copy of the resolutions of the Officers' Conference which I suggest might be the basis for our discussions. You will appreciate that these resolutions have not been accepted or even considered by the Government, and I have not made any decision upon them at this stage.

I shall be very glad to meet your Council and learn the views of your members upon these proposals. The conference will, of course, not be limited to these and you are at liberty to introduce any other subject you think should be brought to my attention.

This will confirm the invitation I extended to you in my telegram suggesting that the meeting should take place on the 23rd June. I have been informed that this date is not convenient to you and that a later date would be preferable. I would be glad if you would advise me of the earliest suitable date for a meeting.

I am sending a copy of this letter to Dr. Hunter, together with fifteen copies of the resolutions of the Officers' Conference.

Yours faithfully,
(Sgd.) N. E. McKENNA.

Sir Henry Newland, Kt., C.B.E., D.S.O., F.R.C.S.,
President,
Federal Council of the British Medical Association,
163 North Terrace,
Adelaide, S.A.

A discussion took place on the views which were to be placed before the Minister. It was resolved that the following principles should be put before the Minister:

1. (i) The medical profession is, in the public interest, opposed to any form of service which leads directly or indirectly to the profession as a whole becoming full-time salaried servants of the State or local authorities.

(ii) The medical profession should remain free to exercise the art and science of medicine according to its traditions, standards and knowledge, the individual doctor retaining full responsibility for the care of the patient, freedom of judgement, action, speech and publication, without interference in his professional work.

(iii) The citizen should be free to choose or change his or her family doctor, to choose, in consultation with his family doctor, the hospital at which he should be treated, and free to decide whether he avails himself of the public service or obtains the medical service he needs independently.

(iv) Doctors, like other workers, should be free to choose the form, place and type of work they prefer without governmental or other direction.

(v) Every registered medical practitioner should be entitled as a right to participate in the public service.

(vi) The hospital service should be planned over natural hospital areas centred on universities in order that these centres of education and research may influence the whole service.

(vii) There should be adequate representation of the medical profession on all administrative bodies associated with the new service in order that doctors may make their contribution to the efficiency of the service.

2. That the controlling body of any national medical service must be given authority to administer the service under its own enabling act and must be free from political interference.

3. That the fund available for the service should be statutorally fixed and a non-alienable portion of the social security tax raised for the purpose, and all central and local bodies must have the power to put unexpended funds to reserve accounts.

4. That the Federal Council considers that the correct method of payment for general practitioners in a national medical service is on a fee-for-service basis.

5. That specialist and consultant practice should be carried out by private practitioners on a fee-for-service basis. In country towns unable to support a private specialist and consultant practice, private practice on a fee-for-service basis should be subsidized.

6. That the role of a government in hospital administration should be one of coordination only, leaving the control to independent boards of qualified persons.

The conference with the Minister was held on July 21, 1947. The General Secretary of the Federal Council in a letter to the Branches, prior to the conference, stated that certain resolutions adopted by a committee of departmental officers would be used as a basis for discussion, and that the Minister was anxious to ascertain the profession's views on the Government's proposals to establish a national medical service.

Though no report of this conference has been made available to this journal, we understand that no agreement was reached on any matter of principle. Informal discussions took place. As a result of questions put to him, the Minister declared that the ultimate aim of the Government was the complete abolition of private practice. When this occurred there would be complete control of the medical profession with direction of its members. The Minister also insisted that a national health service must be under the control of a minister.

The Federal Council put before the Minister its opinions on the advantages of a fee-for-service system in a medical service, and also gave him a copy of the report issued by the Planning Committee of the Parliamentary Joint Committee on Social Security which was published in full in this journal on September 9, 1944. The full facts of the conference will be placed before members of the Branches by the Branch Councils. It was also resolved that in view of the expressed policy of the Federal Government to introduce the complete free medical service under government control, the Branch Councils should be asked whether the profession was prepared, in any circumstances, to negotiate with the Government on the formation of such service.

The Views of a Local Medical Association.

The General Secretary placed before the Federal Council a copy of a series of resolutions adopted by the Southern District Medical Association of New South Wales on a national medical service. These resolutions were published

in this journal in the issue of May 31, 1947, at page 685. The communication was received.

Medical Matters in Parliament.

A communication was received from the New South Wales Branch suggesting that from time to time a statement might be published in THE MEDICAL JOURNAL OF AUSTRALIA on the views expressed by members of Parliament during discussions on medical matters in the House. Dr. W. F. Simmons said that this was not so simple as it sounded. As a rule something like a fortnight elapsed before copies of *Hansard* were available to the public. After that a précis of the discussion in the House had to be prepared and submitted to the Publicity Committee of the Federal Council which would issue a statement. The news would be quite stale by the time it reached the pages of the journal. Dr. Victor Hurley said that very often a factual statement was all that was required. The Editor of THE MEDICAL JOURNAL OF AUSTRALIA, on being invited to speak, pointed out that there were seven parliaments in Australia and that it would be quite impossible for the small staff at the journal office to cover the proceedings of all these bodies. He presumed that the New South Wales Branch had in mind the Federal Parliament at Canberra. What Dr. Simmons had said about the delay in the delivery of *Hansard* was quite true. Recently one or two parliamentary matters had been referred to in the journal, and it was the Editor's intention to do this in future whenever possible.

Contract Practice.

Contract Practice Committee.

The Contract Practice Committee was reappointed as follows: New South Wales, Dr. H. R. R. Grieve; Queensland, Dr. L. T. Winterbotham; South Australia, Dr. R. J. Verco; Tasmania, Dr. J. R. Robertson; Victoria, Dr. C. H. Dickson; Western Australia, Dr. H. Leigh Cook, together with the President, Sir Henry Newland, *ex officio*.

The Federal Common Form of Agreement.

The General Secretary referred to a letter from the Honorary Secretary of the Friendly Societies of Australia dated April 28, 1947, in which it was stated that a conference of representatives of the friendly society movement in all States of the Commonwealth had been held and that the question of the Federal Common Form of Agreement was discussed. It had been decided that the matter could not be determined on a federal basis. One of the resolutions adopted by the conference stated that in view of the opinions expressed by the respective State associations regarding the different conditions existing in States, the conference was unable to approve of the proposed Federal Common Form of Agreement with the British Medical Association on a federal basis. The second resolution stated that as the conference was unable to approve of the agreement on a federal basis, it referred the matter of future medical agreements to State associations so that these associations might consider agreements best suited to local conditions.

The General Secretary said that he had reported the decision of the friendly societies of Australia to Branch Councils. In his letter to the Councils he expressed the opinion that they would be amazed to learn that the reason given was that conditions varied in the different States. He added that in view of the fact that discussions in regard to the Federal Common Form of Agreement had been initiated in 1940 and actively carried on during the previous two years between the two parties, it was difficult to understand why the friendly society representatives should now decide that a federal agreement was not possible because of varying conditions in the different States. An earlier decision in this regard would have saved much time and money.

A letter was received from the New South Wales Branch in regard to a request that had been received from the friendly societies of New South Wales. This body wished for the introduction of an improved Common Form of Agreement based on the Federal Common Form of Agreement. The friendly societies put forward the suggestion that the capitation rates should be 34s. in the metropolitan area and 40s. in country areas. Whilst they did not commit themselves, it appeared from their discussions with the Council that they would be prepared to recommend to their societies that the following rate should be paid, namely, 36s. *per annum* for metropolitan areas and 40s. for "declared cities" in the country with 44s. for country areas other than "declared cities". "Declared cities" would include Armidale, Bathurst, Goulburn, Grafton, Wollongong, Maitland, Lithgow, Wagga Wagga, Katoomba, Tamworth, Orange, Lismore and Albury. The friendly society representatives submitted that while, when the Common Form of Agreement was introduced, conditions of practice in these towns were vastly different from those in the metropolitan area, today there was very little difference. The New South Wales Branch Council held that it was in the interests of the profession and the lodges that an improved Common Form of Agreement should be introduced with as little delay as possible. It therefore asked whether the Federal Council was prepared to agree to the proposed rate of 40s. *per annum* for "declared cities". The Branch Council also asked whether the Federal Council would agree to another suggestion of the Friendly Societies Association that a special rate be granted for young males between the ages of sixteen and twenty-one years and that this rate should be the same as that provided under the Federal Common Form of Agreement for single females. Dr. W. F. Simmons pointed out that the rate which was always charged for apprentices and single men really helped to spread the burden of payment for married lodge members. The matter would, of course, be referred to the local medical associations in the country which so far thought that it was unfair to bring about a reduction in payment. At the same time the local associations were anxious to bring in a new agreement. Dr. Simmons pointed out that the New South Wales Branch Council did not want to let the Federal Council down.

Dr. H. R. R. Grieve moved that approval should be given for the New South Wales Branch to conclude with the friendly societies of New South Wales an agreement which provided, *inter alia*, that the rates for attendance should be 36s. in the metropolitan area, 40s. in "declared cities" areas and 44s. in other country areas. The motion was seconded by Dr. T. Giblin.

Dr. F. W. Carter said that Western Australia was in favour of the proposed alteration. Dr. A. J. Collins supported the motion for the New South Wales Branch. He said that the friendly societies had put up a very good case. The New South Wales Branch Council could not refuse unless the Federal Council objected. Dr. H. W. Horn said that the difference in rates had to do with the isolation of doctors in country areas. The proposals were the first interference with the Common Form of Agreement. If the agreement was varied in this instance, other requests for variation would soon be received. The motion was put to the meeting and carried.

The Federal Council also discussed a request from the New South Wales Branch that it should be allowed to agree to a suggestion by the friendly societies of New South Wales that an agreement should be concluded which provided, *inter alia*, that the rate for single male members between the ages of sixteen and twenty-one years should be the same as that for single females. In discussing a motion that the request of the New South Wales Branch be granted, Dr. F. W. Carter pointed out that the Federal Council had no indication as to what the friendly societies themselves were prepared to do in this matter. He pointed out that lodge members between the ages of fourteen and sixteen years paid 17s. 4d. a year to the lodge for doctor and chemist. Between the ages of sixteen and nineteen years they paid 48s. 4d. At nineteen years of age the amount payable became 53s. 4d. The *per capita* payment was based on the figure of 2·8 persons in a family, and as soon as the rate of payment was altered, the figure of 2·8 was altered also. Dr. Carter urged the Federal Council to consider the matter carefully before it agreed to the New South Wales request. Agreement with the request would alter the whole of his Branch's computations. The Western Australian Branch worked on a flat rate. Until the Federal Council was prepared to work out the whole question accurately no change in the New South Wales agreement should be made. Dr. R. J. Verco said that it was no good insisting on a flat rate because the conditions in the several States were by no means the same. Unless some consideration was given to individual State conditions, confusion was bound to arise. Dr. Colville said that Dr. Verco had expressed the Victorian Branch's view. The Victorian Branch did not want to interfere with New South Wales. Dr. H. R. R. Grieve doubted whether there was much in it. He did not think that much importance could be attached to the figures given by Dr. Carter. The friendly societies gave other benefits than medical benefits. They could not be expected to drop the rates for these benefits in the same proportion as the medical benefits would be dropped under the proposed alteration. The motion was carried.

A discussion subsequently took place on the types of agreement which might be negotiated with friendly societies by individual Branches. It was resolved that the Branches should be informed that they should not negotiate with friendly societies for an amended Common Form of Agreement on terms less advantageous than those prescribed in the Federal Common Form of Agreement.

National Health and Medical Research Council.

Grant for Medical Research.

At the last meeting of the Federal Council it was resolved that the Council should ask the Federal Government to increase the grant made for research purposes in the administration of the National Health and Medical Research Council and also to consider seriously the establishment of a research foundation.

The General Secretary reported that he had written to the Minister. The Minister had supported the Federal Council's request for an increased grant for medical research. Dr. W. F. Simmons said that a subcommittee had been appointed by the National Health and Medical Research Council to approach the Minister in regard to a grant. This subcommittee suggested that £55,000 should be voted for 1947 and for 1948, that £64,000 should be voted for 1949, and £98,000 for 1950 and 1951. The Minister submitted the subcommittee's suggestion to Cabinet, but Cabinet had not been sympathetic. Cabinet, however, did agree to a grant of £50,000 for each of the years 1947, 1948 and 1949. Dr. Simmons regretted that the view of the Cabinet was limited. At the same time as the National Health and Medical Research Council had funds in view for three years, it was able to sponsor research schemes extending beyond one year. Dr. A. J. Collins said that the matter was important. It was one of the functions of the Federal Council to advise the Government that what it had done was not enough. Though it was desirable to have a foundation, Dr. Collins admitted that a case could be made out for research grants covering short periods. He pointed out that there was an increased tendency for medical graduates interested in research to remain in Australia. That more workers were now available was all to the good. Had grants been larger in the past the number of workers would today have been even greater. Dr. Collins thought that facts of this kind should be put before the Federal Government. He moved that the Minister for Health should be thanked for supporting the Federal Council's request for an increased grant for medical research and that the Minister should be informed that the Federal Council considered the present increased grant to be still inadequate and that the Minister be asked to consider the advisability of the establishment of a foundation of £500,000 for purposes of medical research.

Streptomycin.

The General Secretary reported that he had asked the Editor of THE MEDICAL JOURNAL OF AUSTRALIA to publish a report on streptomycin by Dr. Chester S. Keefer. This report had been in the hands of the National Health and Medical Research Council and was published in THE MEDICAL JOURNAL OF AUSTRALIA of June 28, 1947, by permission of the acting Director-General of Health.

Report of the Twenty-Third Session.

The report by Dr. W. F. Simmons, the Federal Council's representative on the National Health and Medical Research Council, of the twenty-third session of that body held on June 3 and 4, 1947, was received.

World Medical Association.

The General Secretary said that the membership subscription of the Federal Council to the World Medical Association for 1947 had been paid.

The General Secretary announced that the first annual meeting of the World Medical Association was to be held at Paris on September 17 to 20, 1947, and that an invitation had been received by the Federal Council to send two delegates and to submit matters for discussion. A communication was received from the New South Wales Branch suggesting that the Association might discuss uniformity of standards for the registration of medical practitioners. Dr. A. J. Collins referred to the variation in standards required in other countries, and said that this had been made obvious by medical graduates who came to Australia from other countries during the war. Dr. W. F. Simmons urged the adoption of the New South Wales Branch suggestion, and it was resolved that the Federal Council should submit the subject of uniformity of registration standards for discussion at the Paris meeting.

It was resolved that Dr. T. W. Lipscomb should be invited to act as delegate of the Federal Council at the first annual meeting of the World Medical Association and that the nomination of a second delegate should be left in the hands of the President.

During discussion the opinion was expressed that Australia should, if possible, use every vote to which it was entitled in discussions at meetings of the World Medical Association, and it was resolved that the Association should be asked to give consideration to the question of proxy votes to constituent members.

The General Secretary drew the attention of the Federal Council to an inquiry that was being made by the World Medical Association into the present position of the medical profession and its relation to the State. He also laid before members a copy of a *questionnaire* of the World Medical Association dealing with that subject. It was resolved that the Editor of THE MEDICAL JOURNAL OF AUSTRALIA should be invited to publish the *questionnaire* as completed by the General Secretary on behalf of the Federal Council.

Centenary of the American Medical Association.

The General Secretary reported that an invitation had been received by the Federal Council from the American Medical Association to send a delegate to attend the centenary celebrations of the Association at Atlantic City on June 9 to 13, 1947. He said that the Council had been fortunate in being able to secure as its representative Dr. F. Kingsley Norris, Senior Vice-President of the Victorian Branch. Dr. Norris had written and had stated that he had conveyed to the American Medical Association the congratulations and good wishes of the Federal Council and Australian gratitude for the assistance which had been given to Australian medicine by the Rockefeller and Carnegie Foundations. It was resolved that the Treasurer should be authorized to pay Dr. Norris's expenses in connexion with the meeting.

Medical Practice in Canada.

The General Secretary reported that he had received from the Canadian Medical Association the copy of a standard letter used in reply to inquiries from persons outside Canada regarding conditions of practice in the Dominions. A copy of this letter had been sent to the Branches and the Canadian Medical Association had been thanked for its letter.

Australasian Association of Psychiatrists.

The General Secretary reported that he had received from the Australasian Association of Psychiatrists a nominal roll of its members and a copy of its constitution.

The Australian and New Zealand Association for the Advancement of Science.

The General Secretary reported that a communication had been received from the Australian and New Zealand Association for the Advancement of Science announcing that a meeting of the Association was to be held at Perth from August 20 to 27, 1947, and asking the Federal Council to nominate degelates. After consultation with the President, Dr. R. D. McKellar Hall and Dr. D. M. McWhae, of Perth, and Dr. E. Beatrix Durie, of Sydney, were nominated as delegates. The nominations were approved.

The Standards Association of Australia.

The General Secretary reported that a communication had been received from the Standards Association of Australia regarding the appointment of a coordinating committee on proposed safety standards. The communication was accompanied by a statement setting out the reasons for the appointment of such a committee and its function, together with a draft constitution. It was explained that the committee was concerned with safety in industry and that it was intended to have supervisory and coordinating functions. The General Secretary said that he had communicated with the New South Wales Branch and with the President, and that Dr. W. T. Nelson, of Sydney, had been nominated as the Federal Council's representative on the coordinating committee. The nomination was approved.

Commonwealth Department of Health: An Advertisement for a Medical Officer.

Reference was made to an advertisement issued by the Commonwealth Department of Health for a medical officer who was to be the member of a unit to undertake a study of the various aspects of posture amongst children. The unit was to work under the general direction of the Director of the Australian Institute of Anatomy at Canberra and the headquarters of the investigation would be in Canberra. The salary range offered, inclusive of cost of living adjustments, was a minimum of £830 *per annum* and a maximum of £1002 *per annum*. The annual increments would be two of £36 and two of £50. Thereafter the salary was to be advanced by two annual increments of £50 to £1102 *per annum*, subject to the acquirement by the appointee of higher degrees or approved qualifications. It was stated that these rates would apply only to returned soldiers and to members of an organization within the meaning of the Commonwealth

Conciliation and Arbitration Act. Otherwise the salary range (inclusive of cost of living adjustment) was a minimum of £760 *per annum* and a maximum of £904 *per annum* with annual increments of £36. Thereafter the salary was to be advanced by two annual increments of £48 to £1000 *per annum* subject to the acquirement by the appointee of higher degrees or approved qualifications. The position was to be exempt from the provisions of the *Commonwealth Service Act.* It was also stated that preference in appointment would be given in accordance with the provisions of the *Re-establishment and Employment Act.*

The General Secretary said that he had been requested by the Federal Council to protest respectfully against the terms of the advertisement. In the opinion of the Federal Council the salary discrimination was tantamount to making a non-medical qualification decisive in the granting of the appointment and might have the effect of excluding an applicant with higher medical qualifications. The Federal Council also thought that prejudice of the public health might be caused by an appointment in respect of which professional attainments were not the decisive requirements. The Federal Council wished to know, in view of the importance of the matter to the medical profession, whether it was the policy of the department that such salary discrimination should apply to other appointments. The General Secretary said that a reply had been received from the Minister in which it was stated that in the appointment of any medical officer his professional qualifications for the particular duties to be performed were the first and main consideration; the only other matter considered was his character. The Minister added that when the appointment was made it was not known whether the applicant would or would not elect to become a member of the Commonwealth Medical Officers' Association. That was a matter to be determined by the officer after his appointment. The Minister accordingly was not in agreement with the opinions expressed by the Council and did not understand the reference to a non-medical qualification. The rule throughout the Commonwealth Service was that the benefits of awards of the Public Service Arbritrator or of the Commonwealth Court of Conciliation and Arbritration should apply only to members of organizations by whose efforts they had been secured and to ex-servicemen.

The Retainment of Expert Legal Advisers.

At the last meeting of the Federal Council the appointment of a permanent legal adviser was discussed at the instance of the Victorian Branch. It was resolved on that occasion that the Federal Council should retain permanently an expert legal adviser to whom reference could be made in any matters affecting the relationship of the medical profession with public bodies or governments. It was also resolved that the selection of counsel should be left in the hands of the President after he had received the advice of the Association's solicitors. The General Secretary reported that on the advice of the solicitors the President had retained the services of Mr. G. Barwick, K.C., and Mr. F. W. Kitto, K.C. The President's action was approved.

The Commonwealth Employees Compensation Act.

The General Secretary reported that at the instance of the Victorian Branch he had taken up with the Department of Air the refusal of the department to pay in full the fees of a surgeon and of an anæsthetist for their attendance upon an injured worker under the *Commonwealth Employees Compensation Act.* He had been able to show to the department that the account was a reasonable one and the department had paid it in full.

The Conditions of Service of Full-Time Medical Officers of the Armed Forces.

Further reference was made to the conditions of service of full-time medical officers of the armed forces, particularly those of the Royal Australian Navy and the Royal Australian Air Force. It was pointed out that some men who had joined these services and had agreed to serve to the end of the war had been unable to secure their release. After a full discussion it was resolved that representatives of the Federal Council should interview the Minister for the Navy and the Minister for Air in regard to the conditions of service of permanent medical officers in these services and that they should press for the early release of medical officers who had been retained in the services long after other categories had been demobilized.

The Australian Pharmaceutical Formulary.

Reference was made to the new edition of the Australian Pharmaceutical Formulary. This formulary was issued in the first place with the approval of the Federal Council and this fact was stated in the preface. It was pointed out that in the proposed preface of the 1947 edition the Commonwealth Pharmaceutical Formulary was referred to. The Federal Council decided to ask the Pharmaceutical Association of Australia and New Zealand to delete this reference. It was also resolved that if this deletion was not carried out, the approval of the Federal Council to the issue of the Australian Pharmaceutical Formulary should be withdrawn. In addition to this, the Federal Council adopted a resolution disapproving of the altered form of the Australian Pharmaceutical Formulary by which it was now designed to be complementary to the Commonwealth Pharmaceutical Formulary.

Fees for Medical Examinations.

At the previous meeting of the Federal Council reference was made to fees payable for the examination of candidates for entry into the service of the Commonwealth Bank of Australia. On that occasion the General Secretary reported that he had written to the Chairman of the Commonwealth Public Service Board on the matter and that a reply was awaited. He now reported that no reply had been received.

At the previous meeting of the Federal Council it was also stated that the Life Offices Association of Australasia were still considering the matter of the form of examination. The General Secretary reported that a draft form of standardized medical report, approved by the Life Offices Association of Australasia, had been received. This form was discussed and attention was drawn to the extensive examination required before the form could be satisfactorily completed. It was resolved that in the opinion of Federal Council an adequate fee for the completion of this standardized form of medical examination for life assurance was two guineas.

The Importation of Electrocardiographs.

A letter was received from the New South Wales Branch regarding the restriction on the importation of electrocardiographs. The Branch reported that as far as could be gathered the only form of electrocardiograph manufactured in Australia was not so efficient for certain special types of investigation as machines imported from abroad. A member who had required one of these special machines had tried to secure permission to import a machine. His application had been refused by the Department of Trade and Customs because electrocardiographs were made in Australia. The Federal Council resolved that in its opinion the restriction on the importation of clinical and research electrocardiographs should be removed.

Income Tax Rebate on Life Assurance Premiums.

The General Secretary reported that he had received a letter from the Royal Australasian College of Surgeons forwarding an extract from an address by the Chairman of the National Mutual Life Association of Australasia, Limited, in regard to income tax rebate on life assurance premiums. The Chairman stated that for the professional man in Australia the income tax allowance limited to premiums not exceeding £100 *per annum* was totally inadequate to enable him to make proper provision for his dependants or his old age. The present allowance compared very unfavourably with those granted elsewhere and the Government should be urged to grant an increase in the allowance on premiums. The Federal Council resolved that the matter should be taken up with the Taxpayers' Association.

Vaccination for Smallpox.

A letter was received from the New South Wales Branch drawing attention to the fact that according to requirements laid down by the International Sanitary Convention for Aerial Navigation, 1933-1934, a certificate for vaccination for smallpox issued by a private practitioner to a person travelling overseas might not be recognized, as each country generally demanded that the certificate should be in the form prescribed by the Convention and be issued by a medical officer in an official position. The final determination of the matter rested with officials in the country in which the traveller landed. Generally speaking, difficulty would be experienced by the traveller if his certificate or that portion of it relating to reaction was not signed by a departmental medical officer at the country of departure. In this respect it was understood that in some cases the certificate would be accepted when a private practitioner had completed the first portion of the certificate and a departmental officer the second portion. The New South Wales Branch Council suggested that the position might be overcome by the appointment of private practitioners as public vaccinators

and that a recommendation to this effect might be made to the appropriate authorities. After discussion it was resolved that the Federal Council should communicate with the Commonwealth Department of Health requesting that the chief quarantine medical officer in each State should be empowered to affix the official seal to certificates of successful vaccination issued by private medical practitioners.

Safety Glass for Spectacles.

The General Secretary read a letter from the Tasmanian Branch in which it was stated that safety glass could not be obtained for the spectacles of children and workers. The Tasmanian Branch letter had been written at the request of Dr. J. Bruce Hamilton, who suggested that the reason for scarcity was that the Commonwealth Government had refused to give an import licence for safety glass. Dr. Hamilton thought that for workers in dangerous occupations and for school children the use of protective glass in spectacles was imperative. The General Secretary said that the matter had been referred to the Branches, most of which supported the opinion expressed by Dr. Hamilton. The Victorian Branch Council, however, stated that one large firm in Melbourne had ample supplies of safety glass and could cope with any demand for it. The Federal Council resolved that the Branches should be asked to notify ophthalmologists in their States that safety glass for spectacles was available in Victoria.

Ship's Surgeons.

A letter was received from the New South Wales Branch dealing with the remuneration of ship's surgeons. The letter referred to a statement by a surgeon on an Australian ship who received a salary of £600 *per annum* and was entitled to make the following charges to patients: first saloon passengers, 7s. 6d. per visit; second saloon passengers, 5s. per visit; and third saloon passengers, 2s. 6d. per visit. The New South Wales Branch Council thought that these amounts should be considered by the Federal Council, especially the amount of 5s. payable by second saloon passegers. After discussion the Federal Council resolved that in its opinion the rates for attendance by ship's surgeons should be as follows: first saloon passengers, 10s. 6d. per visit; second saloon passengers, 7s. 6d. per visit; and third saloon passengers, 5s. per visit.

Supplies of Rice.

Further reference was made to the fact that medical practitioners were still being asked to give certificates covering the supply of rice to patients. On several previous occasions the Federal Council has dealt with this matter and has expressed the opinion that the sale of rice in Australia should be prohibited except as a strict ration to those people for whom it constituted a staple food. Dr. H. W. Horn said that rice was in certain circumstances being supplied to hospitals in Queensland. The Federal Council decided that the Branches should be advised of the Federal Council's view that rice was not an essential article of diet in Australia, and that because of the shortage of rice in rice-eating countries, members of the Branches should not issue certificates for its supply to patients. The Federal Council also decided that it would inform the Department of Commerce and Agriculture that in its opinion there was no justification, while a world shortage of rice existed, for a special issue of rice on medical grounds either to individual patients or to hospitals.

War Emergency Organization.

The Conditions of Service Committee.

The Federal Council decided that the Conditions of Service Committee should not be reappointed.

Repatriation Commission.

Reference was made to clauses 8 and 9 of the agreement between the Repatriation Commission and the Federal Council in regard to the provision of medical benefits for widows, widowed mothers and orphans of the 1939-1945 war. The General Secretary reported that he had written to the Chairman of the Repatriation Commission and had suggested that the rates for attendance for 1946-1947 should be £1 12s. 4d. in metropolitan areas and £1 19s. 10d. in country areas. These rates had been determined by application of the nominal wage indices for the year July 1, 1945, to June 30, 1946. The General Secretary said that the reply had been received from the Chairman of the Commission agreeing to the rates suggested.

The General Secretary read a letter from the New South Wales Branch in which it was stated that the Branch had recently learned that the agreement for the provision of medical services to the dependants of deceased members of the armed forces had not yet come into operation. The agreement had also not been implemented in Queensland. It was understood that the Department of Repatriation contended that the delay was entirely due to the failure of the British Medical Association to obtain and to submit lists of medical practitioners sufficiently comprehensive to provide the new service throughout the State. The letter from the New South Wales Branch to the Federal Council showed beyond question that this contention was incorrect. By May 31, 1946, the Branch had sent to the Repatriation Commission lists containing the names of 644 medical practitioners who were willing to give their services, and since that date to May 31, 1947, another 44 had expressed their willingness to serve. This number of practitioners was spread right throughout the State. The Deputy Commissioner had given a list of towns in New South Wales for which no doctor within a radius of ten miles had agreed to provide services. The New South Wales Branch pointed out that with the exception of a few towns such as six which were named, none of the others had medical practitioners living in them, and in quite a number of instances the towns were many miles from the nearest doctor. The Branch held that the Repatriation Department should be asked to accept responsibility for failure to bring the agreement into operation. As things stood the department was continuing to avail itself of the arrangement under which medical services were provided through the friendly societies. Dr. A. E. Lee said that exactly the same condition of affairs existed in Queensland. After discussion, the Federal Council resolved that Dr. F. L. Davies should interview the Commissioner of Repatriation, and it decided that if the result of this interview was unsatisfactory, the Repatriation Commission should be informed by telegram that unless the agreement between the Federal Council and the Commission was implemented forthwith in New South Wales and Queensland, the agreement between the Council and the Commission for the provision of medical benefits to dependants of deceased members of the armed forces of the 1939-1945 war in those States would be terminated as from August 1, 1947.

At several previous meetings of the Federal Council consideration was given to the fees payable for local medical officers of the Repatriation Department for outpatient treatment. At the last meeting of the Federal Council the General Secretary reported that he had been unable to obtain a reply from the department. Dr. W. F. Simmons said that the department was "cashing in" on a cheap service. He thought that some decisive action should be taken. The Federal Council resolved that a further letter should be written to the Minister for Repatriation asking for an early decision on the Federal Council's request for an increase in fees payable to local medical officers.

At its meeting in November, 1946, the Federal Council considered the fee payable by the Repariation Commission for the completion of the qualification certificate form M.83, used in connexion with war service land settlement. It was then proposed that the fees should be increased from 10s. to 21s. On that occasion the Federal Council had been informed that the matter was one for the Lands Department. The New South Wales Branch now wrote advising that the New South Wales Lands Department had stated that the matter was one for the Repatriation Department and had suggested that a further approach should be made to that department. It was resolved that Dr. F. L. Davies should discuss the matter with the Repatriation Commissioner.

At the last meeting of the Federal Council, mention was made of a scheme for the organization of the medical services of the Repatriation Commission that had been drafted by the Special Advisory Committee on Medical Services. On that occasion it was resolved that the Minister for Repatriation should be asked to inform the Federal Council what action was to be taken in regard to the report. The Minister had replied that he did not propose to make the report public. He was willing, however, to inform the Federal Council of the principal recommendations, though not for publication. The recommendations were set out in a letter from the Minister.

The Rehabilitation of Ex-Service Personnel with a Disability not Accepted as being Related to War Service.

The Federal Council had before it a report by Dr. Victor Hurley and Dr. H. C. Colville, members of a subcommittee appointed by the Federal Council, who had met Mr. F. Rowe, the Director-General of Social Services, and Dr. D. Galbraith on May 9, 1947. At this discussion Mr. Rowe informed the subcommittee that the general idea of the scheme was to tide over the critical few years before all ex-service personnel had been fitted into civilian occupations. When this had been done ex-service personnel would pre-

sumably be able to take their place as ordinary members of the community and the necessity for the scheme would therefore cease. Mr. Rowe had stated emphatically that he was completely opposed to any attempt to convert the scheme into a general medical service for the whole community. In regard to the types of patients who were eligible for assistance under this scheme, Dr. Galbraith had presented the subcommittee with a document in which this matter was discussed. He had difficulty in defining where rehabilitation commenced in cases of ordinary illness, but the department was obviously inclined to be liberal in this regard. They desired that as soon as possible after the commencement of medical treatment, but in any case not later than four weeks, the department should be notified of the likelihood that rehabilitation would be required and would then accept the responsibility of the case from the beginning. In regard to provision of treatment, if it was carried out by private practitioners, the department agreed to pay on a fee-for-service basis. If treatment was carried out by practitioners on a sessional basis in institutions, Mr. Rowe considered the fee of £3 3s. for a three-hour session to be too low and would press for an increase. If treatment was carried out in existing departments in public hospitals or other institutions, the department was willing to help with the provision of personnel and equipment.

It appeared to the subcommittee that the tendency of the department to be over-generous in defining rehabilitation was rather to the advantage of the profession than otherwise, as it would enable certain ex-service personnel to obtain private treatment rather than go to a public hospital. It also appeared that when treatment was carried out in public hospitals, some method would have to be devised whereby payment could be made by the department to honorary medical officers. Clearly this work should not be done in an honorary capacity. In discussing the subject Dr. H. C. Colville said that he had, after a period of two months, operated for the first time on a patient with a war-time disability. This, he thought, was the first stage of a national medical service and it might well extend further. Dr. W. F. Simmons said that at Randwick many specialists found that their patients were not suffering from wartime disabilities. Dr. Victor Hurley said that it was hard to get at the facts, but he thought that some check was being kept. It was resolved that consideration of the matter should be deferred.

It was resolved that the Editor of THE MEDICAL JOURNAL OF AUSTRALIA should be invited to publish for the information of members the fees payable to medical practitioners for completion of the rehabilitation case record, Parts 3(*a*) and 3(*b*), and that it should be a recommendation to the Department of Social Services that it adopt a claim form similar to that used by the Department of Repatriation and that it be attached to the examination form when forwarded to medical practitioners.

The Death of Mr. Walter C. Dobbie.

The Federal Council noted with regret the death of Mr. Walter C. Dobbie, lay secretary of the South Australian Branch, and recorded its appreciation of his services to the medical profession.

Date and Place of the Next Meeting.

The date and place of the next meeting were left in the hands of the President.

Votes of Thanks.

A vote of thanks was accorded to the President, Sir Henry Newland, for having presided at the meeting. Votes of thanks were also recorded to the Victorian Branch Council for its hospitality and for the use of its offices and to Dr. F. L. Davies, Dr. Victor Hurley and Dr. H. C. Colville for their hospitality.

SCIENTIFIC.

A MEETING of the New South Wales Branch of the British Medical Association was held at the Royal Prince Alfred Hospital on May 22, 1947. The meeting took the form of a series of clinical demonstrations by members of the honorary and resident medical staff of the hospital. Parts of this report appeared in the issues of August 2 and August 30, 1947.

Frontal Meningo-Encephalocele in the Newborn.

DR. NORMAN CUNNINGHAM and DR. S. P. BELLMAINE discussed a series of abnormal conditions occurring in infants. The first patient was a female child, aged three months, a first baby. The mother had had no previous pregnancies. A cousin of the patient had died from meningo-myelocele two weeks after birth. The infant's birth weight at the time of the meeting was eleven pounds thirteen ounces. The circumference of her head was fifteen inches, but it was not increasing. A report on the X-ray examination by Dr. D. G. Maitland on February 17, 1947, advised that there was a large defect of the frontal bone due to a meningocele. X-ray films and photographs were shown to illustrate the deformity. It was stated that the type of *cranium bifidum* under discussion was uncommon, occurring about once in every 20,000 births. An attempt to bind the encephalocele gently and restrict its growth had been followed by collapse of the baby. Operative intervention was contemplated at a later date by Dr. Gilbert Phillips and Dr. D. Officer Brown. The final result might be satisfactory provided there was no other intracranial defect present and the baby did not later develop epileptiform convulsions. It was anticipated that portion of the frontal lobe of the brain would have to be amputated. There were no signs of developing hydrocephalus. As far as could be determined at that age, intelligence appeared to be normal.

Œdema of the Newborn.

The second patient was a girl, aged three months, who had been born five weeks prematurely. Her condition had been poor for three weeks after birth, frequent attacks of cyanosis occurring; tube feeding had been necessary. At birth the child's weight was four pounds four ounces and her length seventeen and three-quarter inches. She took two months to become established satisfactorily. At the time of birth there was gross œdema of the feet, legs and thighs and also of the arms with patches of sclerema on the legs. *Thyreoideum Siccum* (one-tenth of a grain three times daily) was given for several weeks. The œdema had gradually subsided except for the feet where it was still appreciable. The child's blood contained 24 milligrammes of urea per 100 millilitres. An excretion urogram gave normal findings. Examination of the urine on April 9, 1947, revealed the presence of *Bacillus coli communis*, non-hæmolytic streptococci and a few motile bacilli. *Bacillus coli communis* was again found in the urine on April 11, 1947. Examination of the blood on February 9, 1947, revealed the presence of 3,880,000 red blood cells per cubic millimetre and a hæmoglobin value of 11·1 grammes *per centum*. On March 21, 1947, the hæmoglobin value was 9·5 grammes *per centum* and on March 23, 1947, 8·1 grammes *per centum*. On March 29, 1947, the total red blood cells numbered 3,520,000 per cubic millimetre and the hæmoglobin value was 10·7 grammes *per centum*. The plasma protein content on May 21, 1947, was 6·7 grammes per 100 millilitres. It was stated that Barlow (1946) had shown that among the previous twenty-two patients under the age of six weeks admitted to Great Ormond Street Hospital with œdema, infection was associated in nine cases, hypoproteinæmia in two, congenital syphilis in three, *icterus gravis* in three, congenital heart abnormality in two, and polycystic kidneys in one; no cause was ascertained in two cases.

Smith's Septic Arthritis of Infancy.

The third patient presented by Dr. Cunningham and Dr. Bellmaine was a fully breast-fed male infant, aged five months, who had first been seen on April 14, 1947. He had then been ill for ten days. His mother stated that his back had appeared to hurt him when he was lifted. The doctor whom she had consulted could find no abnormality. On April 14, 1947, she had noticed that the baby's right leg was "paralysed". The infant had been taking his breast feedings well; no cod liver oil and very little orange juice had been given. On examination the right leg was held flexed and externally rotated. There was tenderness in the right hip and the adductors of the right thigh appeared to be in spasm. There was a fullness in the right groin. The right leg and foot were laterally rotated; there was no movement in the foot. A soft systolic murmur was heard on auscultation at the mitral area of the heart. A provisional diagnosis was made of low-grade osteomyelitis of the head of the femur or septic arthritis of the right hip. The infant was admitted to the Royal Prince Alfred Hospital, and even though there was no fever, 430,000 units of penicillin and 23 grammes of sulphadiazine were given over a period of fourteen days. Examination of the blood on April 15, 1947, revealed 3,440,000 red blood cells and 16,900 white blood cells per cubic millimetre; of the latter 66% were neutrophile cells, 27% lymphocytes and 7% monocytes; the hæmoglobin value was 10 grammes *per centum*. The sedimentation rate was 18 millimetres in one hour. X-ray examination was made on April 16, 1947, the following being the report: "No definite osteomyelitis seen, there appears to be increased space at the right hip joint and this would warrant a further

X-ray in a few days." The condition of the baby was stationary for about four days after admission to hospital and then gradually cleared up. A further blood count on April 21, 1947, showed a total of 3,770,000 red blood cells per cubic millimetre and 11,000 white blood cells per cubic millimetre, of which 48% were neutrophile cells, 39% were lymphocytes, 46% were monocytes, 4% were eosinophile cells and 2% basophile cells; the hæmoglobin value was 11 grammes *per centum*. After a further X-ray examination on April 22, 1947, the radiologist reported: "There is no additional evidence that I can supply and as yet I do not see any definite evidence of septic arthritis or osteomyelitis, but would like serial rays at intervals." Dr. L. Teece in consultation stated on April 28, 1947: "Penicillin appears to have aborted an incipient septic arthritis of right hip. I do not think any immobilization now necessary, but would suggest follow up in case he later develops a quiet abscess." X-ray examination on May 2, 1947, revealed no further change from the previous examination; radiologically the hips appeared normal. The result of a Mantoux test on April 19, 1947, was negative (second strength). At the time of the meeting the baby appeared quite well, but it was considered that final evaluation of the case needed to be deferred for some months.

Congenital Pulmonary Stenosis and Interventricular Septal Defect.

The next infant was a male, aged ten weeks, who had first been referred at the age of four weeks because he did not appear to be thriving. Examination of his heart had revealed a loud systolic murmur especially over the sternum; his respirations were rapid and he had mongoloid features. There was a history of cyanotic attacks soon after birth. Dr. D. G. Maitland had made the following report after X-ray examination of the heart: "There is some widening of the upper medial sternal shadow with increased vascularity of the lung fields—slight dilatation and absence of the pulmonary conus. These appearances are consistent with a congenital lesion." Dr. J. Halliday had made the following report on an electrocardiogram: "*QRS* complexes tend to be biphasic in all leads. No other features worthy of comment."

Retroperitoneal Tumour in the Newborn.

Dr. Cunninghame and Dr. Bellmaine then discussed a female infant who had been born in the King George V Hospital on January 21, 1947, as a footling breech. Her birth weight was seven pounds ten ounces and she had progressed satisfactorily. The mother noticed distension of the infant's abdomen after discharge from hospital at the end of ten days. The infant was readmitted to hospital on February 10, 1947, her weight then being eight pounds ten ounces; a large palpable mass occupied the right side of the abdomen. The tumour was believed to be of renal origin, probably Wilm's tumour. Following X-ray examination on February 11, 1947, Dr. D. G. Maitland reported: "The small intestines and bowel are displaced anteriorly and to the left by a tumour mass, which appears to be continuous with the liver shadow or the right kidney. There is no elevation of the right dome of the diaphragm. The fœtal spine shows a slight kyphosis in the thoraco-lumbar region, but there is no pressure erosion of the adjacent ribs or spine." He further reported, following subcutaneous pyelogram, on February 13, 1947: "The right kidney pelvis is situated over the right ilium. Left kidney pelvis cannot be seen, but there is a suggestion of it in its normal position on the left side. The urinary bladder appears to be normal and is filled after three hours." The honorary urologist, Dr. J. S. Laidley, had recommended exploratory aspiration of the tumour, but a few millilitres only of blood were obtained. Deep X-ray therapy was instituted, but without avail; the mass continued to increase in size. The following report was made after X-ray examination of the abdomen on March 27, 1947: "The tumour opacity within the abdomen has increased in size. Areas of calcification are present on both sides of the upper abdomen." The infant died on April 9, 1947. Post-mortem examination was made by Dr. M. Heseltine, who reported: "Left kidney: This is normal in size and is capped by a normal adrenal gland. The cut surface of both these organs presents no unusual features. The ureter was traced down to the bladder. The kidney on the right side is represented by a thin rim of tissue found at the upper pole of this large retroperitoneal tumour. A small adrenal gland is associated with this kidney tissue. The tumour itself is well encapsulated. It measures 6 × 4 × 4 inches and weighs 1,303 grammes and shells out comparatively easily. In shelling it out, unfortunately, the right ureter was cut and could not be traced in its entirety from kidney to bladder. The tumour is somewhat lobulated and appears to be very cystic in places. The cut surface shows a very soft tumour with numerous cystic spaces alternating with firm cartilaginous areas and large portions of soft putty-coloured tissue. There were no metastases. Histological report: The sections of this retroperitoneal tumour are those of a teratoma in which nervous tissue, including ganglion cells and actual brain tissue, cartilage, muscle fibres and some intestinal epithelium are present."

Dexiocardia.

The last patient shown by Dr. Cunningham and Dr. Bellmaine was a female infant who had first been seen on April 22, 1947; her age was eight weeks. She had been referred because of failure to thrive. Her weight at birth had been six pounds five ounces and at eight weeks of age was six pounds one ounce. Her mother had had a normal labour. The child occasionally vomited after feedings; she only took one and a half ounces at each feed and after this became exhausted and dyspnœic. On examination the infant was found to be pale but not cyanosed. Examination of her heart revealed a harsh systolic murmur audible at the base of the sternum. The heart sounds were louder at the second right intercostal space than at the second left intercostal space, a finding which, in an infant, was the reverse of normal. This observation drew attention to the dexiocardia which was confirmed by X-ray examination. The radiologist, Dr. Badham, reported: "The appearances suggest that there is a congenital heart. The film of the chest is not a direct A.P. one, but appearances here are suggestive that there may be a dextrocardia. The liver is on the right side and the stomach is on the left." The electrocardiogram (Dr. K. Maddox) revealed a high degree of right axis deviation only; there was no inversion of the waves in Lead I. Dr. Cunningham and Dr. Bellmaine commented that the electrocardiographic findings conflicted with the diagnosis of dexiocardia, and when this was considered in conjunction with the X-ray picture it was felt that even though the heart was in the right thoracic region, it might not be a true dexiocardia, but rather a grossly enlarged right ventricle with dextro-position of the aorta and a patent interventricular septum.

(To be continued.)

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Seminar in Medical Statistics.

THE Post-Graduate Committee in Medicine in the University of Sydney wishes to announce that Dr. H. O. Lancaster will hold a seminar in medical statistics on Wednesday, September 10, 1947, at 5.45 o'clock p.m. at the School of Public Health and Tropical Medicine, University Grounds. The subject of the seminar will be "The Poisson Distribution and its Application to the Study of the Accuracy of the Red Cell Count and Bacterial Plate Counts", and Miss Helen Newton Turner, of the Section of Mathematical Statistics, C.R.I.R., and Dr. David Duncan, Senior Lecturer in Agricultural Statistics, will take part in the discussions.

These seminars are held on the second Wednesday of each month and any workers in medicine or related sciences are welcome to attend. If possible, data collected by members of the group will be discussed.

Week-End Course at Kempsey.

The Post-Graduate Committee, in conjunction with the Eastern District Medical Association, will hold a week-end course in the Red Cross Tea Rooms, Belgrave Street, Kempsey, on Saturday, September 13, and Sunday, September 14, 1947.

Saturday, September 13, 1947.

2 p.m.: Registration.
2.30 p.m.: "Hints on the Conduct of Pregnancy and Labour", Dr. Gordon Lowe.
4.15 p.m.: "Management of Cardiac Disease in General Practice", Dr. T. M. Greenaway.

Sunday, September 14, 1947.

9.30 a.m.: "Head Injuries", Dr. I. Douglas Miller.
11.15 a.m.: "More Hints on the Conduct of Pregnancy and Labour", Dr. Gordon Lowe.
1.30 p.m.: "Recent Therapeutic Advances in Pulmonary Disease", Dr. T. M. Greenaway.
2.45 p.m.: "Surgical Relief of Pain", Dr. I. Douglas Miller.

The fee for the course will be £1 1s. There will be no charge for members of the services. Those wishing to attend are requested to notify Dr. R. Lindsay Douglas, Honorary Secretary, Eastern District Medical Association, Belgrave Street, Kempsey, as soon as possible.

Special Correspondence.

LONDON LETTER.

By OUR SPECIAL REPRESENTATIVE.

"Free and Friendly Conference."

THE Annual Representative Meeting of the British Medical Association was held in London on July 22-24 and was well attended. The two preceding meetings had been devoted mainly to consideration of the National Health Services Bill and its potentialities. This time many other subjects were discussed, but the *National Health Services Act* was constantly referred to, either directly or by implication, and rarely in complimentary terms.

At earlier meetings speakers often prefaced their remarks with "if there is a National Health Service"; this time the opening words more often ran "when there is a National Health Service", thus indicating that the bill had become an act and so the law of the land. The Council was criticized for not keeping the profession better informed as to the course of the present discussions; the chairman of Council cleared this point by stating that the Negotiating Committee had only once met the Minister face to face, and then for a few minutes, when he gave his approval to the resumption of discussions, even though such discussions might require amending legislation later. Since this first meeting all the work had been done by groups of doctors meeting Ministry officials, and no decisions had been reached. The chairman of Council added that a full statement of the Negotiating Committee's submissions was being drawn up and would be circulated when ready. It was decided that, in the event of agreement not being reached on questions of principle between the Negotiating Committee and the Minister, the divisions would be called together to brief their representatives for a special meeting of the representative body to decide as to further action. The meeting instructed that a clear lead should be given by the Council before any final decision was made. The Minister recently asked the profession to nominate suitable men to serve on statutory bodies under the new *National Health Service Act*, and strong exception has been taken to the fact that so many of the British Medical Association nominees for membership of the regional hospital boards have failed to win official approval, though these nominations were asked for by the Minister. In one regional hospital board, with a total membership of 26, seven of whom are doctors, only one British Medical Association nominee gained a place. Other medical bodies, such as the Royal College of Surgeons and the Medical Women's Federation, had fared equally badly. The suggestion that "coming events cast their shadows before" seemed to be generally shared by those present.

"Hands Across the Sea."

Both in his Presidential address (*British Medical Journal*, July 26, 1947, page 121) and in his welcome to the representatives of overseas constituencies, Sir Hugh Lett referred to the Parent Association's desire for a closer liaison with other members of the family. To foster this project it is proposed to establish a British Commonwealth Medical Council to which "the affiliated and daughter Associations within the Commonwealth" would be invited to send direct representatives. "It is also proposed to establish an Empire Medical Advisory Bureau at B.M.A. House for giving advice and help to those who come here from the Commonwealth and the Colonies for postgraduate or undergraduate study." Such a bureau would work in close association with other established bodies of a like nature, "and one of the main objects . . . is to provide a centre where all who come from overseas to study medicine in this country will receive a warm welcome and be made to feel that they are at home and not visitors in a strange land".

On Wednesday morning business was interrupted to allow the President to welcome overseas representatives. Sir Hugh Lett spoke in the warmest terms of the part played by the dominions and colonies in the recent war and since, and said what a pleasure it was to see colleagues from these countries present once more at meetings in this country. His speech was simple, short and sincere, and met with warm approval from the home members of the Annual Representative Meeting. In reply, Dr. D. R. W. Cowan (South Australia) delivered a personal message from Sir Henry Newland which was received with applause. Dr. Cowan's diction evidently surprised one of the audience, who commented, "I thought he was a Yank"; as the critic comes from a country renowned for its broad acres, broad vowels and cricketers, his hearers were rather amused. Dr. John Dale (Victoria) had to drape his long frame over a rather low desk in order to reach the microphone and coined the phrase "a healthy man is a free man", which was much to the taste of his audience and which was repeated by a later speaker in another connexion.

There was no doubt as to the warmth of welcome felt for the visitors from "down under" and of the desire for a closer and more constant contact. The proposed bureau at British Medical Association House is tangible proof of this and should prove a potent factor in drawing the doctors of the Empire nearer together. A close liaison was of mutual benefit in the war years and is something which should not be allowed to lapse in times of peace.

"There was Lack of Woman's Nursing."

Shortage of nurses is a burning question and was fully discussed. The big hospitals have good lists of entrants, but a strong plea was made for the smaller hospitals and nursing homes. It was pointed out that a girl starting nursing is paid at the rate of elevenpence per hour, while if she takes up clerical work she receives 1s. 6d. for the same time. The age group for recruitment now is smaller than pre-war and there are many more opportunities open to nurses than some years ago. Industry has taken a fair number and several speakers felt that a reduction could be made here as many industrial nurses did not see more than three to four patients a day; with a five-day week these girls were hardly pulling their weight. In big hospitals the work required to be done by nurses has increased, and one speaker felt that in a busy hospital the correct ratio was one nurse for two patients. The part-time nurse has done well in some areas, but again the economic side was stressed; while the nurse was paid 2s. 1d. an hour, the charwoman or lay help who looked after her house in her absence received 2s. 6d. an hour. Great emphasis was laid on the training of nurses in nursing, and as one speaker said, what is wanted is a first-class nurse and not a half-baked doctor. It was generally agreed that better conditions were required both as regards pay, holidays, hours of work, and more freedom in the hours off duty. Reference was made to the number of nurses who did not finish their course of training, mainly owing to illness, and one case was quoted in which only five out of a class of twenty finally qualified. Some speakers felt that the General Nursing Council was somewhat out of touch with present conditions. A motion to draw the Minister of Health's attention to the urgency of the problem was defeated on the casting vote of the chairman and it was decided to take no further action until the Working Party set up some eighteen months ago should have reported. This report is expected to be in the hands of the Minister within two or three weeks.

"There's Death in the Cup—so Beware."

Some strong comments were made on the arrangements for the provision and distribution of milk. One speaker said that on 5% to 10% of the farms which produced milk the cows were tuberculous, many others were infected with *Brucella abortus*, and a larger proportion still had mastitis. It was stressed that the subject concerned several government departments, and the meeting decided to impress upon the Minister of Health the urgent necessity of action by the combined efforts of the Ministries of Health, Food and Agriculture and the British Medical Association in order to ensure that no milk but clean safe milk was made available as efficiently as possible.

This year is the centenary of Edward Lear, of Nonsense Novels fame, and notice has been taken of it in the papers. With apologies to Lear a London consultant produced the following:

> Ere they finish with Nationalisation
> We advise total pasteurization,
> For if milk were quite pure
> We'd have cripples far fewer
> And save tons of coal on cremation.

"There is Nothing More Requisite for Business than Dispatch."

Any notes on the Annual Representative Meeting would be incomplete if reference was not made to the excellent

arrangments made, and work done, by the Secretariat, under the leadership of Dr. Charles Hill, and by the Editor of the *British Medical Journal*, Dr. H. Clegg, and his staff The new loud-speaker system worked well and prevented the unofficial debates so often heard at the back of a large hall. All necessary documents were in good supply and readily available. Though the day's work did not end till 6.30 p.m., a copy of the minutes were on every desk the next morning at 9 a.m. The luncheon and tea rooms were so arranged and spaced as to allow time for a leisurely absorption of the food provided. The meeting closed on Thursday evening and the President's address appeared in the *British Medical Journal* that week, followed by a complete twenty page report in the week following (August 2, 1947). Over 320 representatives attended and more than 160 motions and amendments were dealt with in the two and a half days. Much of the credit for this turnover lay with the chairman, Dr. J. B. Miller, of Lanarkshire, who set a fine example of brevity, clarity and decisiveness in all he said. When it was pointed out that both he and the secretary were infringing a standing order by smoking, he regularized the position by obtaining the suspension of the standing order concerned, between two puffs at his pipe. Dr. Guy Dain, who will be remembered by those attending the Melbourne meeting in 1935, was always ready as chairman of Council to explain or amplify any difficult or disputed point. The way in which his suggestions and guidance were followed indicated the trust reposed in him. Speeches were frank and nobody pulled their punches, but courtesy and good humour always tempered the wind to the shorn lamb. The meeting was a refutation of the frequently expressed opinion that doctors have no business sense.

"The Doctor's Brougham."

A difference of opinion was shown as to the continued use of the "DOCTOR" signs on cars. These had the word "Doctor" in large red letters on slips about eight inches by four inches which could be stuck on the windscreen and were of great use in wartime. Doctors in London and in closely populated areas where parking facilities are poor find them still a help, but the meeting decided against their use under present conditions. In passing, one representative mentioned that an anæsthetist who left his car outside a hospital longer than was intended was fined in the local court, even though the car had the doctor's sign. His sense of grievance was eased a week later when, after giving an anæsthetic to a close relative of the leading police official in the town, he was able to add the amount of his fine to his ordinary fee and so avoid financial loss on the transaction. The locking of cars was also discussed, but the meeting was not able to decide whether a locked car was less liable to be stolen than an unlocked one; experiences of speakers differed.

"Something that Replies."

A request has been made that the Postmaster-General should arrange to accept "messages" at telephone exchanges when a doctor was out, so that these messages could be repeated later to the doctor on his return home. Many doctors are without domestic help and the doctor's wife has to go out queuing and shopping, so that it is impossible for someone to be always in the house. Owing to shortage of staff and material the Postmaster-General refused the request. A private manufacturer has said that he was anxious to "try out" a robot doctor at a cost of £80 each in fifty doctors' houses. If nobody was at home the robot would answer a telephone call and say: "This is the robot speaking, doctor so and so is out, can I do anything for you?" If the message was then given the whole conversation would be repeated to the doctor on his return by turning a handle.

CANADA LETTER.

FROM OUR SPECIAL CORRESPONDENT.

THE medical and supply ship *Nascopie* mentioned in my last letter has had an unfortunate end to her career on a hidden reef in Canada's northern area, Baffin Land. The large group of medical and educational personnel aboard are being taken aboard a Hudson Bay Company supply ship. Some will be flown out by the Royal Canadian Air Force, which has already carried in food and emergency supplies. The medical surveys of Eskimo health may have to be abandoned as a result of this disaster.

An epidemic of poliomyelitis has been gathering momentum in the Pacific coast province of British Columbia and the number of cases is nearing one hundred. This is the first major outbreak in Canada this summer, although sporadic cases are spotted across the prairies and into Ontario. There is nothing to suggest that Montreal will again be stricken as it was a year ago with 1200 cases. It is interesting that "Polio" insurance has been sold in substantial amounts in Montreal at $6.00 per person, guaranteeing medical and hospital care, orthopædic procedures and appliances.

South of the border the debate on the subject of the provision of medical care for the American people is warming up again, with elections in the air. However, a rather unique experiment is being tried in New York City where, under the directorship of Dr. Dean A. Clark, the health insurance of Greater New York is unfolding. The background for this was set by the exhaustive studies on the cost of medical care, which showed that 10% of American families pay 41% of the nation's medical bill, 58% pay 18%, and 32% pay 41%. Three-fifths of the population get only one-fifth of the medical service.

The new prepaid plan for New York will be based on the group method of practice, with medical groups and employee groups having to meet certain prescribed standards. It is planned that twelve full-time physicians (or 25 part-time) will form a group to look after each 10,000 persons. The chief of each specialty represented must be certified by the American Specialty Board concerned. A limit of 800 insured persons per full-time physician has been set. Each medical group will be autonomous and will contract to deliver medical care to a certain standard. The annual premium for a single person is $29, for a family of two $58, and for three or more $87. The medical group receives $20 per person who has elected to have the group care for them. This will guarantee an income which would average $10,000 per physician. Variations from this figure will be determined by sharing arrangements made within each medical group.

The first woman doctor to be made director of a health region in Canada is Dr. Thelma S. Miner, who goes to the Assiniboia District of South Saskatchewan, an area familiar to many Australians from their Air Force training days.

Canada's Department of Transport has been issued a warning that all non-shielded short-wave diathermy machines will be banned at the end of this year.

A further survey of Eskimo health in the north is being carried out by a group from Queen's University led by Dr. Malcom Brown, sponsored by the National Research Council, the Department of Health and Welfare and Queen's University. This may in some measure compensate for the loss of the *Nascopie*, although the survey party will be concerned mainly with attempting to discover why the Eskimos are not afflicted with heart disease and cancer.

Obituary.

BASIL KILVINGTON.

THE career of the late Dr. Basil Kilvington, whose death was announced recently in these pages, is described in the following tributes from his colleagues. For the photograph we are specially indebted to Dr. Julian Smith.

DR. A. E. COATES writes: Dr. Basil Kilvington, the son of the Reverend James Kilvington, was born in the North of England. He commenced his education at Grennoch. At the age of eleven he came to Australia and continued studies at Camberwell Grammar School and the University of Melbourne, graduating M.B., B.S. in 1898 at the age of twenty-one, M.D. in 1901 and M.S. in 1902. A resident medical officer at the Melbourne Hospital in 1899, he then became tutor at Trinity College and carried out teaching and research work at the university. He obtained the Syme Research Prize in 1908.

He published the results of his experiences in the treatment of trigeminal neuralgia by alcohol injection of the fifth nerve in *The Australian Medical Journal* in May, 1911. He had a unique character, an alert mind, whimsical humour, easy approach, combined with a gentleness, sympathy and understanding which endeared him to colleagues and patients.

To the young surgeon he was a tower of strength, nor did he disdain to assist a junior in a difficult operation. Many surgeons in Victoria will remember his kindly help and recollect his unostentatious arrival in their time of trouble. He disliked pomp and parade and preferred the company of his family and friends. A keen Rotarian, he was a past president of the Melbourne Rotary Club. He was President of the British Medical Association, Victorian Branch, in

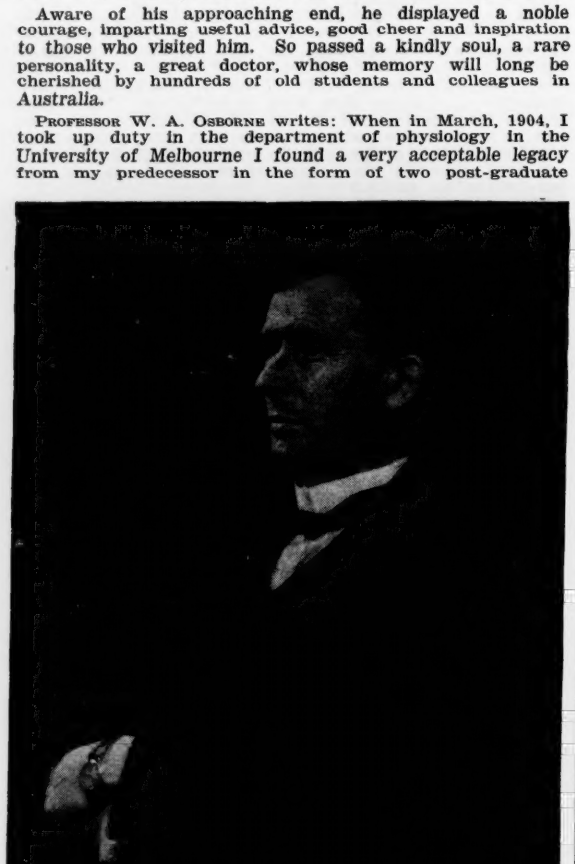
1921, and a Foundation Fellow of the Royal Australasian College of Surgeons.

His hobbies included pictures, philately, play-reading and Australiana. His regular visits to Tasmania enabled him to carry out researches into early Australian history, on which he was an authority.

His family life was exemplary. His wife, with whom he shared his literary interests, was his devoted companion.

Aware of his approaching end, he displayed a noble courage, imparting useful advice, good cheer and inspiration to those who visited him. So passed a kindly soul, a rare personality, a great doctor, whose memory will long be cherished by hundreds of old students and colleagues in Australia.

PROFESSOR W. A. OSBORNE writes: When in March, 1904, I took up duty in the department of physiology in the University of Melbourne I found a very acceptable legacy from my predecessor in the form of two post-graduate



researchers; one was E. H. Embley, who had to all intents and purposes completed his investigations on the action of volatile anæsthetics, the other was Basil Kilvington. The research on which Kilvington had already spent some effort would have required a long apprenticeship to histological technique, and this at the time Melbourne could not give; moreover, I doubt if even had the best methods been applied any important findings would have been forthcoming. Kilvington soon took up the investigation of nerve repair and nerve grafting. The distinguished neurologist Bethe had announced that if a nerve trunk is cut and the ends so placed that regeneration from the proximal stump is made impossible, there will be found, after a suitable interval of time, regenerated and functioning fibres in the distal and isolated part. This was criticized by Langley, who explained the supposed distal regeneration by the growth of wound fibres along the distal path. Kilvington confirmed this by covering the distal stump with a rubber cap—no live nerve fibres were subsequently found in this nerve trunk; but if the cap were not adjusted then functioning fibres were detectable, no matter how far the distal stump was removed from the proximal. One important feature of this research was the realization that a degenerating nerve fibre exercises a very powerful and presumably chemiotactic attraction on the regenerating nerve fibre sprouting from the proximal stump. Then came various grafting experiments in which it was shown that a regenerating stump of a nerve trunk containing, say, 4000 fibres could supply 6000 or more distal fibres on regeneration. I suggested that if bifurcation were present then an axone reflex would be found and this proved to be the case. Another most important principle elucidated was that though regenerating motor fibres grow only down motor paths, and sensory down sensory, the choice of path within these limits is haphazard, so that the patterns above and below the neurone do not correspond. One application of this law of the distortion of the pattern was to challenge the validity of Head's epicritic postulate. At the time this was considered to be bad science and bad taste, but time has demonstrated the truth of the criticism.

It was always Kilvington's dream to innervate the bladder after spinal transsection by pulling down cut fibres from above the lesion and guiding their regeneration along sacral paths to the bladder. Though he proved the possibility of this in the experimental animal, he never unfortunately had a human case in which this operation could be carried out owing to the length of the cord destroyed by the trauma. Kilvington, I regret to say, came in for much unkind criticism from his senior colleagues for venturing to do research work in a physiological laboratory, for despite the labours of Lister and Horsley, surgery was supposed, at least in Melbourne, to be based on anatomy and some slight modicum of pathology only, and surgeons who had never contacted research proclaimed loudly in the words of Hamilton Russell that "to import the lore of the physiological laboratory into the operating room would end in disaster". However, Kilvington kept on with unruffled temper at his researches.

Two characteristics of his work and personality remain vividly impressed in my mind; one was the extraordinary manual skill shown in operative procedures—he always seemed to me to possess three hands and not two; the other was the quick and spontaneous and usually brilliant flashing of wit which set bystanders laughing and made collaboration a delight. I could give many instances, but to choose from so many is difficult. Kilvington will be honoured as a fine surgeon, a loved colleague and a sympathetic and able teacher. My chief recollection is that in addition to an attractive personality he was a true man of science with the noble urge for research and with the skill to carry this out.

DR. VICTOR HURLEY writes: The medical profession in Melbourne has lost several of its outstanding figures in recent months, and the death of Basil Kilvington occurring soon after that of his life-long friend and colleague, B. T. Zwar, removes the last of a group of surgeons who commenced their careers during the first few years from 1900 onwards.

Kilvington began his training for a surgical career as a demonstrator under Sir Harry Allen in the department of anatomy and pathology in the medical school of the University of Melbourne. As a demonstrator in the dissecting room he was quick, sure and precise in his dissections, and his skilful technique was displayed in the research work which he later undertook with Professor Osborne in the physiology department.

The results of the classical researches of Kilvington and Osborne on peripheral nerve injuries and regeneration received well-merited recognition beyond Australia. They established beyond doubt that regeneration of divided peripheral nerves proceeded from the severed proximal ends of the axones remaining in continuity with their nerve cells in the central nervous system. Kilvington always retained his interest in this problem and worked at it for several years—returning finally to it when he retired from the active surgical staff when he had more free time to devote to it.

For some of his earlier years he practised in the eastern suburbs, but as his reputation as a sound and skilful surgeon became established, he gave up general practice and devoted himself to surgical work and consulting practice.

Kilvington was a most deceptive operator. He worked calmly and smoothly without an unnecessary or indecisive movement, so that he would complete extensive operations skilfully and neatly in a shorter time than almost any other member of the surgical staff. The most critical situation never disconcerted him and he was resourceful and sure in an emergency.

He was gentle in all his methods—in his handling of tissues as well as in his dealings with patients and with the residents and nurses who worked under him. Many present-day surgeons owe much to his assistance and friendly encouragement in their earlier years. Beneath his modest and self-effacing exterior there was concealed a nimble mind and a pretty wit which could hit off a situation most aptly and effectively. Many are the stories circulating

of bon mots, or of some of the particularly outrageous leg-pulls of his—but in none of these was there ever any malice.

He was Stewart Lecturer and chairman of the Board of Examiners in surgery at the University of Melbourne for several years as well as being a member of the Faculty of Medicine.

During the recent world war Kilvington had already completed his period of service on the active surgical staff of the Royal Melbourne Hospital, but he willingly consented to return to help in carrying on the surgical work of the hospital which was in difficulties owing to the absence of so many of the surgical staff on war service. He threw himself into the work with his accustomed zeal and enthusiasm until he himself had to enter hospital for operation. He eventually recovered after a long and stormy illness, and although he resumed practice for a time, it was under considerable difficulties.

During his final illness, when he was again in hospital for several months, he bore his troubles cheerfully and uncomplainingly and was always ready with some quip or pleasantry with his friends when they came to visit him.

He will be greatly missed by a large circle of friends and most of all by the large number of his patients, to whom he gave his services willingly and for whom he performed so many acts of kindness—the full total of which will never be known.

He leaves a widow and two sons to mourn his loss.

DR. KONRAD HILLER writes: With the passing of Basil Kilvington another tie is severed between the generation of today and that of twenty-five years ago and more. Early in his career, Kilvington leant rather towards the academic side of medicine. He was found in the dissecting room of the anatomy department, where he held the position of demonstrator, in the pathology and physiology laboratory, where he carried out his original work on nerve degeneration. However, these activities only paved the way and laid the foundation for what was to become his life's work—surgery.

A vacancy having arisen in the surgical out-patient department of the Melbourne Hospital, he was elected to that position on the advice of the newly constituted Advisory Board of that institution, and he was one of the first to be elected in this way. Previously to this, appointment to positions on the honorary staff of that hospital had been by hospital subscribers at triennial elections, or, if a vacancy occurred in the interim, by the Committee of Management, without any expert advice on the relative merits of the candidates. For many years this mode of election had been condemned and attempts had been made to alter it, but it was probably the sorry spectacle of that last election which was held in 1907 that hastened the change. With the advent of the Advisory Board the indignities of these elections were removed, and a sound method of selection substituted, which by its very constitution ensured the appointments on the honorary staff by merit alone, and at the same time gave the successful candidate security of tenure. The whole outlook was changed. Suspicion, jealousy and enmity gave place to friendliness and cooperation. Untrammelled devotion to the aims of the hospital was made possible.

Into the new order Kilvington was launched, and no one did more to foster this new spirit than he. At first as an out-patient surgeon and later as surgeon to in-patients, he carried on with conscientious realization of the obligations which such a position demanded as a hospital and a teaching school.

By effluxion of time he retired in 1934 to become a consultant surgeon. However, during the war just terminated, when the surgical staff became depleted almost to breaking point by its members offering or being called up for service, he was the first to respond to the call for volunteers, and for four arduous years he resumed his old position of full surgeon to in-patients. It is probable that this to some extent undermined his health, so that a serious major operation attended by grave complications left him with a convalescence which was never complete, and slowly the illness of which he died developed, and in spite of all care and attention he succumbed.

In disposition Kilvington was always gentle and unobtrusive. He never sought the limelight. His surgery avoided the spectacular, but was brilliant and sound, and a sudden emergency in an operation found him imperturbable and always master of the situation. Even at these moments he would probably make some whimsical remark which brought a smile to those working with him.

The many students who passed through his hands will remember him for his kindliness and his teaching. His residents esteemed him for his helpfulness, patience and tolerance. His patients invariably regarded him as a friend as well as one whom they trusted, knowing well that he would not spare himself to do his utmost for them.

To his wife and family the deepest sympathy of his colleagues and friends is extended.

DR. LESLIE HURLEY writes: In the passing of Mr. Basil Kilvington, the community in general and the medical profession in particular, both of whom he served so well, have sustained a very severe loss.

His interests were spread over a very wide range, and any task he undertook was always carried out with the utmost enthusiasm and to the very best of his ability. He was never satisfied with anything but the best.

He made valuable contributions to medical science, particularly in connexion with nerve injuries and hydatid disease. For many years he was Stewart Lecturer in surgery, and for his very efficient work in this capacity, and also for his kindly and tolerant understanding of their difficulties and problems, his students owe him a deep debt of gratitude.

To the Royal Melbourne Hospital, which he loved so well, he gave long and very efficient service, and it was a very severe blow to him when he reached the retiring age. During the war years he was invited to return again to the active staff and he most willingly responded to the call. It was no surprise to those who knew him well to find that right up to the beginning of his last illness he retained all his former enthusiasm and his fine surgical judgement and skill as an operator. It was a pleasure and an education to watch him perform a difficult abdominal operation. He used few instruments, handled the tissues gently, and although he never seemed to be hurrying, completed the operation in a minimum of time. Few surgeons are able, as he was, to separate rapidly and safely knotted coils of bowel by cutting with a pair of scissors.

To those who knew him well, and had the great privilege of his friendship, the dominant impression that will remain will be that of a tolerant and kindly personality, without an atom of malice or envy in its composition, and combining in a unique fashion an almost puckish humour and youthful outlook with the wisdom and understanding of more mature years. Even during his long illness his never-failing sense of humour, his deep interest in humanity and his kindly consideration for others never failed him. His monument will be the affectionate remembrance in which he will be held by his many friends and old students, on whom his great abilities and lovable personality have left a deep and lasting impression.

He was never happier than when enjoying the companionship of his family. Their loss has been an irreparable one, and to his widow and children we extend our most sincere and heartfelt sympathy.

DR. FRANK BURKE writes: The many friends of Mr. Basil Kilvington were saddened on hearing of his death after a long and trying illness.

After retiring from the position of surgeon to in-patients at the Royal Melbourne Hospital, he was appointed consultant surgeon to Prince Henry's Hospital—the first surgeon to occupy that position.

Here, in the initial stages of the change from the Homœopathic Hospital to the post-graduate teaching hospital, Prince Henry's, he gave his advice and help with the surgical work of the hospital in a manner which will always be remembered with gratitude by the members of the honorary medical staff of Prince Henry's.

I first became acquainted with Mr. Kilvington when I became his house surgeon in 1930.

The next few months were full of joy and interest for me, as one of his outstanding characteristics was his interest in young people, particularly recent medical graduates.

In the operating theatre his manual dexterity and calmness in times of stress made a profound impression on a young graduate.

To his patients he was more than their medical adviser, as I have found in recent months while looking after his practice.

Their attitude to him is aptly summed up by a patient who recently wrote: "I was sorry to see an account of Dr. Kilvington's death; to me he will always be remembered as a very great friend."

Australian Medical Board Proceedings.

QUEENSLAND.

THE undermentioned have been registered, pursuant to the provisions of *The Medical Acts, 1939 to 1946*, of Queensland, as duly qualified medical practitioners:

Chesterfield-Evans, Hugh Harvey, M.B., B.S., 1946 (Univ. Sydney), Brisbane General Hospital, Brisbane.

Lipscomb, Bertram Mark, M.B., B.S., 1943 (Univ. Sydney), Hilderstone, Hilderstone Street, Kangaroo Point, Brisbane.

Sharrod, Frederick John, M.B., B.S., 1945 (Univ. London), M.R.C.S. (England), L.R.C.P. (London), 1947, c.o. Watson Victor Agency Limited, 105, Eagle Street, Brisbane.

Macintosh, Laurel Jean, M.B., B.S., 1946 (Univ. Sydney), Brisbane General Hospital, Brisbane.

Alcorn, Pamela Joan, M.B., B.S., 1947 (Univ. Sydney), Brisbane General Hospital, Brisbane.

Clifton, Vivian Keith, M.B., B.S., 1947 (Univ. Sydney), Brisbane General Hospital, Brisbane.

Brett, Peter Ronald, M.B., B.S., 1943 (Univ. Melbourne), Repatriation Hospital, Greenslopes, Brisbane.

O'Reilly, James Kevin, M.B., B.S., 1947 (Univ. Melbourne), Mater Public Hospital, South Brisbane.

Parry, Daphne Ruby Joyce, M.B., B.S., 1947 (Univ. Sydney), Brisbane General Hospital, Brisbane.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Wyse, Sydney James, M.B., B.S., 1946 (Univ. Sydney), Cessnock District Hospital, Cessnock, New South Wales.

Chapman, Patricia Joan, provisional registration, 1947 (Univ. Sydney), Balmain and District Hospital, Balmain.

Havyatt, Miles Tom, M.B., B.S., 1946 (Univ. Sydney), 3, Bellevue Park Road, Bellevue Hill.

Pettinger, Douglas Firth, provisional registration, 1947 (Univ. Sydney), 57, Kimberley Avenue, Lane Cove.

Angel, Gertrude, provisional registration, 1947 (Univ. Sydney), 31, Muston Street, Mosman.

Corrigendum.

OUR attention has been drawn to a typographical error in the leading article on tuberculosis control in Denmark, published in the issue of July 12, 1947. The statement is made that before the war tuberculosis mortality was 3·4 per 100,000 of population. The correct figure is 3·4 per 10,000 of population. This error is regretted.

Medical Appointments.

Dr. E. J. Reye has been appointed medical officer, Department of Health and Home Affairs, pursuant to the provisions of *The Public Service Acts*, 1922 *to* 1945, and *The Health Acts*, 1937 *to* 1946, of Queensland.

Dr. B. S. Hetzel has been appointed clinical pathologist and pathological registrar at the Royal Adelaide Hospital, Adelaide.

Dr. Desmond John Pittar, Dr. Stephen Grimwood Barr, Dr. Murray Linton Verso and Dr. Eric James Fane De Salis have been appointed on probation as medical officers, Third Division, Health Laboratories, Commonwealth Department of Health.

Dr. H. H. Field-Martell has been appointed medical officer of health, in pursuance of the provisions of *The Health Act*, 1911-1944, of Western Australia.

Books Received.

"Essentials of Syphilology", by Rudolph H. Kampmeier, A.B., M.D., with chapters by Alvin E. Keller, M.D., and J. Cyril Peterson, M.D.; Second Edition; 1946. Oxford: Blackwell Scientific Publications, Limited. 8½" × 5½", pp. 482, with many illustrations. Price: 25s.

"The 1946 Year Book of Neurology, Psychiatry and Neurosurgery"; Neurology—edited by Hans H. Reese, M.D., and Mabel G. Masten, M.D.; Psychiatry—edited by Nolan D. C. Lewis, M.D.; Neurosurgery—edited by Percival Bailey, M.D.; 1947. Chicago: The Year Book Publishers, Incorporated. 7" × 4¾", pp. 732, with many illustrations. Price: $3.75.

"The 1946 Year Book of Endocrinology, Metabolism and Nutrition"; Endocrinology—edited by Willard O. Thompson, M.D.; Metabolism and Nutrition—edited by Tom D. Spies, M.D.; 1947. Chicago: The Year Book Publishers, Incorporated. 7" × 4¾", pp. 574, with many illustrations. Price: $3.75.

"Suicide and the Meaning of Life", by Margarethe Von Andics; 1947. London, Edinburgh and Glasgow: William Hodge and Company, Limited. 7¼" × 4¾", pp. 236. Price: 8s. 6d.

Diary for the Month.

SEPT. 9.—Tasmanian Branch, B.M.A.: Ordinary Meeting.
SEPT. 9.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
SEPT. 12.—Queensland Branch, B.M.A.: Council Meeting.
SEPT. 15.—Victorian Branch, B.M.A.: Finance Committee.
SEPT. 16.—New South Wales Branch, B.M.A.: Medical Politics Committee.
SEPT. 17.—Western Australian Branch, B.M.A.: General Meeting.
SEPT. 18.—Victorian Branch, B.M.A.: Executive Meeting.
SEPT. 18.—New South Wales Branch, B.M.A.: Clinical Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute; Brisbane City Council (Medical Officer of Health). Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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